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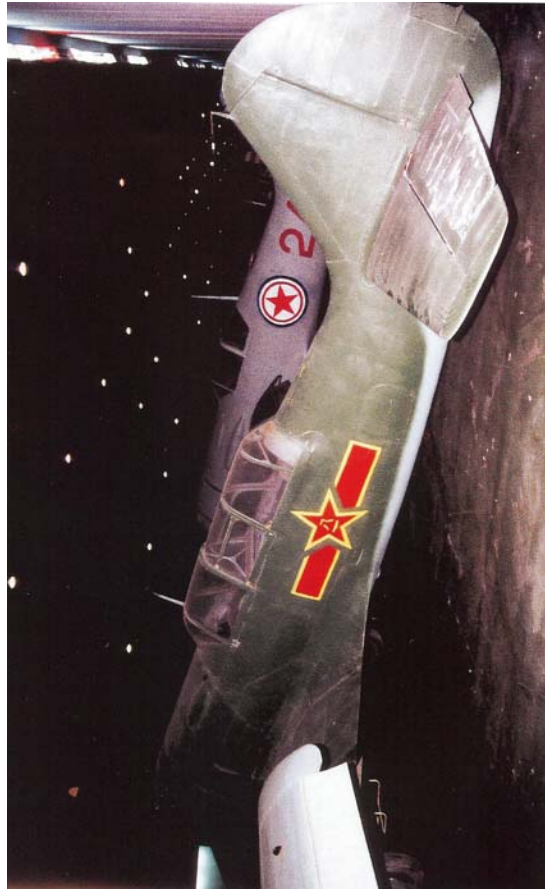
Curtiss C-46 Commando in Congolese Service
The Korean People's Air Force: Part 6
Tinker: Spanish Civil War Ace
Central American Goony Birds
Dutch ECM in WWI
Ecuador Bell 214

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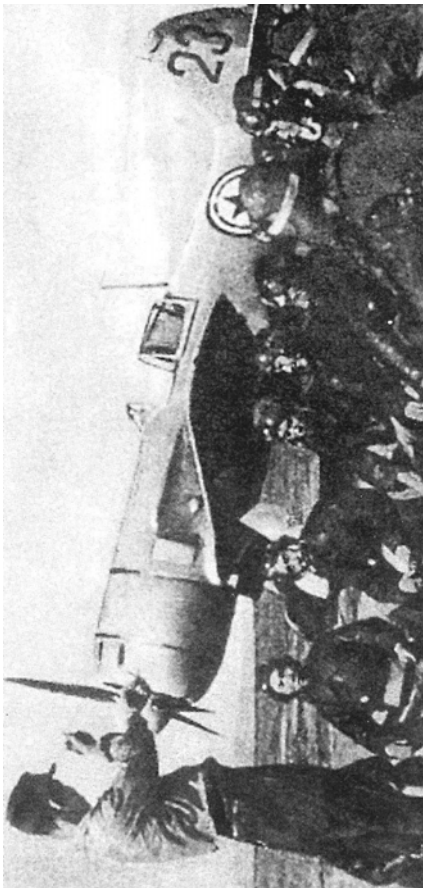
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SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

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TAILS OF THE GOONEY-BIRD: After taking a long sabbatical. Ted Koppel (SAFCH #118) has resumed his series on small-air-force C-47. Earlier installments were: Oman (SAFO #15) and El Salvador & Guatemala (SAFO #60). He says that if the feedback is positive, he'll take on Africa next.

CORRECTIONS: "Thanks for running my want ad for the Sandanistan T-33 camo and markings. Unfortunately, there was one problem. It gave my old email address which has been out of service for almost two years. Can you please re-run it with the correct one: james.wilcox1956@gmail.com." James Wilcox (SAFO #710), Canada.

COVER COMMENTS: Because there was not yet any two-seat MiG-15s available in 1950-51, each Soviet MiG fighter aviation regiment was issued two Yak-17UTI for in-unit conversion and proficiency training. The first KPAF jet

fighter pilots received their initial training on the Yak-17UTIs at Tianjin, PRC, from the MiG-9 pilots of the Soviet 20th IAD, which had arrived at nearby Tangshan the previous month to begin training the PLAAF's 17th FAD. This veteran PLAAF Yak-17UTI is now on display at the China Aviation Museum at Xiao Tangshan mountain (sometimes called "Datangshan" in the West). (Mark Pasqualino via Doug Dildy)

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AUSTRALIA

ÖFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.

2/12 (40 pages) "Luftkrieg über Albanien 1916-18" 7 pages including a map and 12 photos. "Short SC.7 Skyvan beim Bundesheer" 9 pages including one color and 20 b&w photos, and 3 color profile drawings. "Meteor-Flugzeuge in Österreich" 2 pages including 2 photos and a small 3-view drawing.

CZECH REPUBLIC

Revi These and other issues are available from SAFCH Sales Service: \$7.00 per issue plus postage.

#72 "Shoki u nepratel" 3 pages, 5 photos, and color profile of Ki-44 in USAAF markings. "Zalba letce Leutnanta Otto Uhera" 4 pages, 9 photos of balloon-busting Knoller C.II. "Pribeh Nesheru" 6 pages, 7 photos, 4 color profiles of Israeli Mirages. "Ceskoslovenska vojenska vicemotorova letadal ve sluzbach Luftwaffe" 6 pages, 12 photos, 2 color profiles, & kit survey (Fokker F.IX, Aero A-304, Avia B-158, Letov S-50, Praga E-210). "Marcel Bloch MB.520 N° 339" 2 page, one photo, color profile. "Whitey Feightner" 5 pages, 9 photos, & 3 color profiles of radio-controlled Hellcats in garish colors. "Harry von Bulow-Bothkamp" 4 pages, 3 photos, & 2 color profile of Fokker Dr I. "Shuttle: United Kingdom-Prague 1945" 3 pages & 7 photos of B-24 in Cz. markings. "Me 262 Schwalbe Heinze Bara" 1 page, 3 color profiles.

#73 "Pirati a Albanie – Albatross D.III (Oef)" 6 pages, 10 photos, & 3 color profiles. "Pribeh Neseru – Argentinske pokracovani – letony Dagger a Finger" 10 pages, 13 photos, & 6 color profiles. "W-3A Sokol in detail" 3 pages, 17 photos. "Policejni Be 51 Beta Minor" 3 pages, 2 photos, & 3 color profiles. "Stihaci esa Korejske valky 1950-53. Sesreleni Majora G.A. Davise Jr." 3 pages, 3 photos, & a color profile (F-86). "Kadyz se prasilo za kaombajny ... aneb obrazy ze sluzby Il-10 v Ceskoslovaensku" 3 pages, 9 photos of Cz. Il.10. "Il-2 Ostfront 1941-1942" 2 pages, 7 photos.

ENGLAND

AVIATION CLASSICS, The address and details are at: www.aviationclassics.co.uk. Four issues £20.

#15 Hawker Hurricane (134 pages) "Determination, courage and genius" from Snipe to Fury; "Prototype, testing and production"; "Into Service". Over France in 1940". "Battle of Britain: Phase 1 and 2"; Battle of Britain: Phase 3 and 4"; "Hurricane Squadrons of the Battle of Britain"; "Storm at Sea" (Sea Hurricane); "Refining the breed"; "Night Hawks"; "A Greek in the RAF"; "Comrades in Arms" (Russia); "Inside the Hurricane"; "Displaying a legend"; "Hurricanes in the Mediterranean"; "Versatility in action" (Far East); "Hurricanes abroad" [6 pages, 10 photos, & 3 color profile drawings (Yugoslav, Finnish, & Polish)]; "Survivors".

FRANCE

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 71 euro for 6 issues). Website: www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

#188 Julliet - Aout 2012 (94 pages) "L'aviation navale argentine durant la guerre des Malouines (1)" 20 pages including 39 photos, 2 maps, & 4 color profile drawings [Alouette III, Sikorsky S-61D (2), & Super Étendard]. "As français 14/18: Machel Coiffard, le flambeur de saucisses (1)" 13 pages including 22 photos & 2 color profile drawings (Spad XIII). "Un prototype pas comme les autres, le Dewoitine D.520 n° 243." 8 pages including 9 photos & 3 color profile drawings of 2-seat D.520. "Indochine: l'Armée de l'Air face à la Thaïlande (2)" 21 pages including 29 photos, a map, & 7 color profile drawings (Farman 221, Loire 130, MS.406, Curtiss Hawk III, Potez 29, Potez 542, & Mitsubishi Ki-30). "GAO 553: Mureaux et Potez sur las ligne Maginot (2)" 15 pages including 46 photos & a color profile drawing (Potez 63.11). "Yokosuka K5Y Willow (2)" 12 pages including 18 photos, 2 pages of scale drawings, & 2 color profile drawings.

GERMANY

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlief Billig,

Oraniendamm 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

#36 (114 pages) "Die Erprobung von Atomwaffen durch die Luftstreitkräfte der UdSSR" 28 pages on Soviet atomic warfare developments including 45 photos of a/c, bombs, & tests. Aircraft covered are Tu-4 (Bull), Tu-16 (Badger), Tu-85 (Bear), & M-4 (Bison). Also included is a map showing the locations of atom-bomb tests by all nations, 2 color profile drawings (Mig-21MT & Su-7BM), & a Chronologie covering the years 1935 to 2006. "Als das Flugzeug das Schießen lernte" 18 pages, 30 photos, & 5 color profiles (Hansa Brandenburg W 29, Albatros W 4, Roland C-II, & French Hanriot HD.3, & Soviet Anatra Anasal) on WWI German aircraft armament. "Von Dragonfly zur Sea Stallion" 42 pages on USN helicopters including 91 photos & numerous tables. "Operation 'Tannenbaum'" 12 pages on German plans to invade Switzerland including 8 photos & 2 maps. "100.Geburtstag van Hanna Reitsch" 7 pages & 10 photos on the Nazi test pilot and the planes she flew.

ITALY

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Maggio 2012 (100 pages) "Incidenti Militari" 1½ pages including 5 photos (Russia Ka52, Norway C-130J, Ecuador CASA CN-235M, & Chile F-16).

Giugno 2012 (100 pages) Color photos: Pakistan Il-78 'RII-004' & UAE Boeing 474 'A6-HRM'. "Tornado: MLU a metà strada" 6 pages and 7 photos on Italian Tornados. "L'IRIAF si pressnta" 2 pages with 10 photos on Iranian a/c (McDonnell F-4D, Chengdu FT-7N, Northrop F-5E/F, Mirage F1EO, Su-24, Grumman F-14A, Fokker F-27, & Pilatus PC-7). "Marrakech Aero Expo 2012" 2 pages with 10 photos on Moroccan a/c (KC-130, Northrop F-5, T-6C Texan, Mirage F1, Alpha Jet, F-16C/D, & CL-415). "Incidenti Militari" 1½ pages including 4 photos (Bulgaria MiG-29 & Thailand ATR 72).

Luglio 2012 (100 pages) "Incidenti Militari" ½ page including 2 photos (Brazil T-27 Tucano).

The Curtiss C-46 Commando in Congolese Service

Leif Hellström

The C-46 is a peculiar border-line case in Congolese military aviation history. The aircraft concerned were not strictly speaking part of the Congolese armed forces, at least not for several years, and many of them carried no national insignia. But they had military registrations and almost all their time was spent supporting the Congolese military, one way or another.

When the CIA drastically expanded its air operations in the Congo in 1964, it quickly became apparent that it was necessary to have a CIA-controlled air transport capacity to provide logistical support to the air bases around the country. In theory, the Belgian crewed FATAC unit, flying C-47s provided under MAP to the Congo, should handle all air transport, but this was not enough. The Air Branch of the CIA's Special Operations Division therefore decided to set up a small air transport unit of its own in the Congo. The C-46 had long been a mainstay of the CIA air transport operations, together with the C-54. Since the C-54 was too large for many of the fields in the Congo, the C-46 was selected for use there. (For convenience, the collective term "C-46" will be used in this article for all Curtiss Commando versions.)

The majority of the pilots initially hired by the CIA to fly the C-46s were Cubans, almost all of whom had taken part in the Bay of Pigs operation flying transports. José "Cheo" Balboa, who had been a transport pilot since 1941, was hired as the commander of the Congo transport unit, or perhaps rather as its chief pilot. He arrived in the Congo in August-September 1964, around the same time as the first aircraft.

The first Commando was a former Aerovias Panama aircraft, HP-300, which had in storage for a year after being used on United Nations charters in the Congo. The reason this particular aircraft was obtained was that the owner of Aerovias Panama, a man called George Monteiro, was also one of the men behind the CIA's aircraft maintenance organization in the Congo, known as Wigmo. It was not a "stock" C-46, but rather a Super 46C rebuilt with different engine nacelles. The second aircraft, which arrived at roughly the same time, was a standard C-46 that

remains unidentified. It may have been one of the CIA's own C-46s, previously used in the Americas. The two aircraft were given normal Congolese military registrations, 9T-PLA and 9T-PLB, but did not carry any national insignia.

"Cheo" Balboa recalled the early days of the operations:

When we were ready to start up in Leopoldville, they sent over an aircraft commander from the US Air Force: a specialist in the C-46. He was there to show landings and take-offs. We went to the end of the runway and he drew a line at 1,500 feet. He said, "We have to take off at 1,500 feet: can you do it?" "Yeah, if you do it; I've got more hours in the C-46 than you!"

It is very risky. Because you start at the end of the runway with full power, do a level run and when you hit 30 miles per hour you put quarter flaps. And the airplane hangs right there by the engines. But if one engine quits – pfft – you are way, way below the minimum safe speed.

This way it was possible to take off in less than 1,500 feet, but only when empty. Normally the C-46 required 2,000-3,000 feet to take off.

The C-46 had not been very popular in US military service, with a reputation for poor single-engine performance and generally unforgiving behaviour. On the plus side, the C-46 took a much bigger load than the C-47 although could use the same size airfields as the latter. But it placed greater demands on the pilot, in a place like the Congo:

To fly there, you had to fly the airplane. Ninety per cent of the airports were small airports. And if you were used to flying in Cuba or in the USA with long runways... The C-46 is an airplane where you cannot trust the brakes. If you hit the brakes, and get the brakes hot – you lose it. So you had to fly that airplane as if it did not have brakes. You had to fly by the numbers.

The main task of the C-46s was always to support the CIA air detachments around the country, but they were also used for all sorts of other military transport tasks. One time in late 1964, Balboa and his co-pilot

René Tuya were at a small grass airfield south of Lisala where there was fighting. They were supposed to fly some troops out, but there was great confusion. One soldier insisted on bringing his truck! People kept piling into the aircraft.

I was in the front and Tuya was in the back. We had all these women, with kids, bananas – everything! I said, “Tuya! Either you get these people out of there or you get to stay here!” The people wouldn’t let him close the door. I moved the airplane to the runway, without the help of Tuya. I went down to the end of the runway – and I had to go, with the door open and everything. The rebels were shooting mortars all over.

We had 77 or 78 people aboard, plus the cargo we had in the airplane, plus the door open and the ladder down: every chance to get into trouble. I took off, and I took off right between the trees. When we got to the other airport we found big pieces of trees in the wheel wells.

On 12 November 1964, C-46 9T-PLA lost an engine on a flight in the eastern Congo and had to put down at the airfield in Manono. This was behind enemy lines even if the rebels did not actually have troops in Manono at the time. Among the passengers were some Americans, including the chief of the CIA air operations in the Congo, Jack Anderson. After landing they discovered that one of the cylinders was completely wrecked. Luckily an old R-2800 engine had been left at the field by one of the UN C-46 charter operators and they took a cylinder off of that engine, enabling them to take off again the following day.

After Balboa left in late 1964, Fausto Valdez took over as chief pilot for the C-46s. “The problem with Fausto Valdez,” his colleague René García recalled, “he doesn’t reach the pedals: he is too small! He got a lot of problems with the airplane: that’s a big son of a bitch!” There were a number of other Cubans, including “Paco” Valliciergo and José Perez-Menendez. From 1965, the C-46 operation was gradually integrated into the Wigmo operation and ceased to be considered a separate unit. The aircraft were still provided and paid for by the CIA, as were all the operational costs, but their management was done by Wigmo. The C-46 air crews were for the time being still hired through the CIA front company Caribbean Aero-Marine, Inc., in Miami, but they were

no longer exclusively Cuban. Among the first from another country was Colombian Efrain “Coco” Morantes, who was one of the more colourful transport pilots in the Congo. He had previously flown C-46s for the Swedish Transair company in the Congo.

The CIA lost its first C-46 in early February 1965, or possibly one of the last days of January, when 9T-PLB had a hydraulic failure and ran off the runway at Paulis a few days after the town had been liberated, while flying in supplies to the troops. It was flown by a couple of old transport pilots, including Perez-Menendez. The aircraft was stripped of usable parts and then the remains were broken up, pushed into a pile and burnt. A replacement aircraft was quickly delivered, this time from Intermountain, Inc.; this was another CIA proprietary company, located near Tucson, Arizona. One of their standard C-46s was sold on paper to Corsair Aircraft Services Co. in Miami – another CIA front – and then immediately reported as exported to Lichtenstein, which was the location of Wigmo’s head office. The new aircraft was flown to the Congo and registered 9T-PLC.

N’Djili airport in the capital Leopoldville (later renamed Kinshasa) was always the main base of the CIA air operations, but for practical reasons the C-46s were sometimes based elsewhere to be closer to the front line. After Stanleyville was recaptured from the rebels in November 1964, one C-46 had normally been based there while the other one was stationed either at Paulis or Bunia. This practice continued until mid 1965, when the Bunia C-46 was moved back to Leopoldville, and from September 1965 they were both based in the capital. The N’Djili runway is one of the longest in the world and to cut down on the taxiing to the Wigmo hangar, which was the last one down, the C-46 pilots would land about halfway down the runway. They would still make regular supply runs, about once a week, to the various other air bases, bringing everything from fuel and ammunition to food and beer.

In October, or possibly late September 1965, an additional C-46 was delivered and given the registration 9T-PLD. Its previous identity is not known for certain, but it is very likely that it was a C-46 that previously had served with Pan-African Airlines in Nigeria, another CIA proprietary company. The aircraft in question, 5N-AFB, was de-registered as “sold to Lichtenstein.”

The C-46s continued to see considerable service on all sorts of missions, and a November 1965 report by the Congolese Army, the ANC, stated that the three C-46s were “of great value” to the ANC. By this time they were even used on reconnaissance missions, checking for rebel troop movements. Aircraft 9T-PLA, -PLC and -PLD were reportedly rigged with static lines for parachute drops and were at times used for paratrooper training and demonstration jumps, but more commonly the C-47s were employed for such duties.

There were six C-46 pilots by late 1965 and one crew flew no less than 195 hours during November, but there were cases of crews even flying over 200 hours, or more than six and a half hours per day. At that rate, a C-46 pilot could make up to 3,600 dollars per month, with all the extras. “And believe me, I got no beefs out of them,” Wigmo manager Ray Tluszcz later recalled. “They were making money like it was going out of style. And paid no tax on it.”

Aircraft 9T-PLA had a mishap at Baudouinville on 3 January 1966, when it nosed over after landing on soft ground. The lower part of the nose was crushed and the propellers bent. There were no spare propellers available and instead the C-46 was fitted with propellers taken off a scrapped B-26B Invader. The Hamilton Standard hub, type 23E50, fitted both aircraft types but the blades used on the B-26 were more than a foot (30 cm) shorter. The aircraft nose was rebuilt by Rudy Körner, a German who was trained as an aircraft builder, and after a month the aircraft could be flown out. Most of the pilots refused to fly the C-46 while it had B-26 propellers, but Coco Morantes, said: “Rudy, when you say this airplane can fly, I will fly it!” The crew could compensate the smaller size of the propeller by applying more pitch. As soon as they became available, the correct size propellers were fitted to the C-46 again.

Some months later, 9T-PLA nosed over again, this time on a concrete surface at N’Djili, and was damaged in the exact same way. Körner had been on vacation after the first incident and when he got back, he had to rebuild the nose all over again!

The Congolese Air Force, the FAC, which Wigmo’s aircraft were in some respects a part of (although only “on loan” from the US government), went through a major re-organization in February 1966 and the Wigmo C-46s and C-45s now made up 222 Squadron of 22 Wing. This was only a paper

designation, however, which was ignored by all concerned and soon forgotten.

On 15 November 1966, Wigmo lost a second C-46 when Cuban pilots Castor Cereceda and Juan Peron ditched 9T-PLC into the Congo River near Stanleyville after losing an engine on take-off. They were heavily loaded with a jeep, fuel and various equipment. The crew and passengers were all unharmed and the aircraft remained afloat long enough for a river steamer to arrive and put cables around the fuselage. But in the ensuing attempts to salvage the C-46 and tow it to shore, it was damaged further by mishandling and eventually sank.

By early 1967, the CIA was winding down its paramilitary engagement in the Congo and some of its aircraft were being withdrawn while others were being handed over to the mercenary 210 Squadron, employing Belgians, South Africans and other nationals. The two surviving C-46s were scheduled to be withdrawn by 1 July 1967, but this never came to pass. The Wigmo management, consisting of Ray Tluszcz and his deputy George Barnes, instead gradually began running the company as a commercial concern. Already the year before, Tluszcz had bought a Transair C-46 that had been left behind damaged in the Congo, fixed it up by using Wigmo resources at cost, and then re-sold it to a Congolese airline at a good profit. He now began casting around for other C-46s to buy and, among other ones, had an agent in Sweden look into three C-46s available there.

By July 1967, the two remaining Wigmo C-46 were available for hire by the Congolese government for up to 70 hours each per month at 170 dollars an hour just for the rental. Tluszcz made this arrangement with Congolese General Bobozo. All maintenance, landing fees, and other direct costs were paid by the Congolese in addition to the rental fee. By this time the Cubans employed by the CIA had also left and Wigmo instead hired its own crews. A few former mechanics had already re-trained as co-pilots earlier on and this became a trend over the next several years, with a dozen or more new pilots getting training by Wigmo itself.

The campaign against the *Simba* rebels had all but finished by mid 1967, but another threat now came up instead. The ANC still employed many white mercenaries and some of those revolted on 5 July 1967 and captured Kisangani (formerly Stanleyville). Since the Congolese no longer trusted any of its

mercenaries, all the foreigners flying with 210 Squadron were expelled, as were the Belgians flying C-47s and C-54s. Wigmo was left alone, however, as was the Italian flying school. As there were still very few qualified Congolese pilots, none of which had officially graduated into operational service, Wigmo and its C-46s had quite an important role over the coming months.

The mercenaries in time left Stanleyville and began moving south. On 6 and 7 August, C-46 9T-PLA flown by Swedish pilot Ragne Möller with some other Wigmo people as observers, made reconnaissance runs along the roads north of Bukavu to locate the mercenary column. They overflew the mercenaries a number of times and got a few bullet holes in their C-46. On 8 August, 9T-PLD made a similar reconnaissance flight near Bukavu. It was flown by Rolf Schmidt, a German who, like Möller, had re-trained from mechanic to pilot. His good friend Herbert Lotz was one of several Wigmo mechanics captured by the mercenaries at Stanleyville and forced to go along with them. Since 8 August happened to be Lotz's birthday, Schmidt flew very low over the column and waggled his wings as a greeting. Unfortunately, those on the ground thought he was about to drop paratroopers on them and everyone – including Lotz! – opened fire on the C-46. The aircraft was hit by several bullets and the left engine caught fire, forcing Schmidt to make an emergency landing at Kamembe in Rwanda. It was not until two months later that the C-46 could finally be flown back to the Congo to be fully repaired in Kinshasa.

But there was worse to come. A few Congolese pilots had been sent to the eastern Congo to fly T-28s against the mercenary rebellion. In early September, three T-28s were based in Goma. One day there was an unsubstantiated report that Goma had been taken by the mercenaries and 9T-PLA was sent to investigate on the morning of 5 September 1967. The C-46 was flown by Ragne Möller, with Dutchman Jan Hekker as co-pilot. They flew at some 6,000 feet to avoid ground fire and tried to raise Goma by radio, but without success. It was just getting light when they reached Goma, just in time to see the three T-28s taking off. Hekker wrote a report on what transpired next (the text is slightly edited):

We continued in a southerly direction when Möller suddenly saw one T-28 to the left rear of us which

opened fire. He rolled the aircraft left and right and we could hear the impact of the bullets. I went into the cabin to see where the damage was but I did not see anything on the wings or fuselage; going back I grabbed the parachutes which had been lying in the cabin and helped Möller to strap in. Meanwhile I asked him to change frequency to 118.5 as I knew they had been using that before. We called and received an answer back from Simba control (Goma). The answer from Simba control was that we could return to Goma.

We told him that a T-28 had attacked us. We could hear the tower saying to the airplane, "M'Baki, M'Baki [name of pilot], don't shoot, don't shoot, that is 9T-PLA!" After that another burst hit the airplane and when I looked back in the cabin I saw the reflection of flames on the ceiling. I shouted to Möller that we were on fire and at the same time the fire warning light came on. I went back into the cabin and looked out of the windows on the left side of the cabin and saw flames at the trailing edge of the flaps and also that a part of the flaps was missing. Meanwhile Möller feathered the left engine and tried to extinguish the fire, to no avail. The fire continued. I went forward again and told Möller to put the airplane in automatic pilot and that we had to jump out. I opened the right hand emergency exit. Möller in the meantime came into the cabin. We adjusted the straps and we noticed smoke coming into the cabin through the floor. After that we jumped out. The airplane spiraled down and crashed in a wooded area.

Normally the C-46s never carried parachutes, but by pure coincidence they had been transporting the 'chutes recovered from a Congolese T-28 crew that had run out of fuel and jumped at too low altitude for their parachutes to deploy. Despite a bent D-ring on one of them, they worked fine and Möller and Hekker landed safely in a banana plantation in Rwanda. They were collected by Rwandan soldiers, taken to a hotel to freshen up and rest and were then escorted to the Congolese border and set free.

It turned out that the C-46 had been spotted from the ground and that FAC Colonel Albert Tukuzu had assumed that it was a mercenary-flown aircraft. He had ordered the Congolese pilot Michel Baku to take off in T-28C FG-067 to shoot the airplane down. (M'Baki was the pilot of one of the other T-28s that

took off at the same time on a strike mission; obviously there was some mix-up of their names in the report.) This comedy of errors resulted in the one and only air-to-air “kill” of the entire seven-year Congo Crisis.

With 9T-PLD grounded in Rwanda and -PLA shot down, likewise in Rwanda, Wigmo was temporarily bereft of operational C-46s. But during September a new Super 46C was taken on charge by Wigmo and given the registration 9T-PLG (9T-PLE and -PLF were C-45s). There is no documentary evidence of the provenance of this aircraft, but it seems likely that it was the former Transair SE-CFE, bought by Ray Tluszcz in June 1967 and registered 9Q-CZG. This went to the Congo-Frigo company but they only used it briefly and, judging from photos, the configuration of 9T-PLG is consistent with that of SE-CFE.

The end of the mercenary revolt in late 1967 meant the end of major military operations in the Congo for the time being, but Wigmo still had plenty of work transporting for the Congolese government in general and the ANC in particular. All the C-46s still had military registrations and by this time at least some of them also carried Congolese national insignia. The Wigmo air crews were all civilian, however.

Two more aircraft were added during 1968, both former Transair Super 46Cs that had later served with the Fairline charter company which went bankrupt. One of these cost Tluszcz \$15,800, plus \$2,000 for a 100-hour inspection, and then “Coco” Morantes flew the aircraft to the Congo. “I made \$30,000 worth the first month it was back,” Tluszcz recalled. One of the new aircraft, 9T-PLJ, apparently had its cargo door enlarged in the Congo, to enable it to carry larger pieces of cargo, such as Landrovers.

Wigmo now had four C-46s which would generally fly around 1,100 hours per month in total. Two of the C-46s were used for scheduled round-trips of the Congo: one clockwise and one anti-clockwise. They sometimes flew gold loads for the government. The gold was mixed with copper into very heavy bars, which could then be moved around with minimal security since they looked like ordinary copper bars. One plane load could be worth five to eight million dollars. The bars would be re-melted and reprocessed in Belgium.

The year 1969 saw several changes. On 16 April of that year, 9T-PLJ crashed into the Congo River in

Kinshasa with the loss of all those aboard. It was flown by the Swede Ragne Möller. The cause of the crash was never fully established. The aircraft suffered an undercarriage malfunction and there was speculation that some of the passengers may have panicked and tried opening the door while in flight, upsetting the balance of the aircraft. Of all the Wigmo C-46 losses, this was the only one with any fatalities. A final new C-46, 9T-PLL, was obtained a few months later as a replacement. Nothing much is known about this aircraft, except that it was quite likely also a Super 46. According to Ray Tluszcz, one of his C-46s was bought from a Brewery in Maryland. An unidentified C-46 marked 9Q-CWR was seen in Miami in June 1969, and that may well have been the delivery markings of the aircraft that became -PLL.

Wigmo was still registered in Lichtenstein and George Monteiro in Miami was one of the main owners, even if it is unclear to what extent – if any – the CIA was still involved. Various disagreements caused Ray Tluszcz and George Barnes to break with Monteiro and Wigmo. Instead a new company called SODEMAC (short for Société d’Entretien et de Maintenance d’Avion au Congo) was created in the Congo, with the Congolese government owning 90 % and Ray Tluszcz owning 10 %, and from 22 November 1969, this took over the operation of the C-46s. At least three of the remaining C-46s, the ex Swedish aircraft, were owned by Tluszcz and Barnes and they simply brought them over to SODEMAC. The status of the fourth aircraft, 9T-PLD, is less clear, since it was one of the CIA provided aircraft. The point was probably moot, anyway, as -PLD suffered in-flight engine problems on 15 October 1969 and was abandoned at Mbandaka, since it was the last “stock” C-46 and repairs would have been too expensive. It is believed to later have been further damaged in a storm when it was sitting on the ground without any control surface locks mounted. The aircraft was probably not officially written off until mid 1970 or so, since SODEMAC still listed four C-46s on strength in the spring of that year.

There was a final C-46 crash on 15 July 1970, this time without any loss of life. Aircraft 9T-PLK suffered an in-flight engine problem and the crew, Swedes Lars Britzelli and Roberth Forsberg, diverted to the airfield at Mbuji Mayi. After landing, the aircraft rolled into a large ditch, ripping off the undercarriage and snapping the left wing.

By 1971, SODEMAC therefore only had two C-46s left. They continued in service, but the writing was on the wall. The FAC received its first three C-130s in the spring and summer of 1971 and since these could easily fly into any field that could take the C-46, the need to use the hired aircraft decreased. In September 1971, the name of the Congo changed was changed to Zaïre and before long SODEMAC turned into SODEMAZ and the FAC became the FAZ. These changes probably did not affect the C-46s much, however, since they were last known in use in late 1971. 9T-PLG was withdrawn from use some time after August 1971 and the final documented flight of any SODEMAZ C-46 was by 9T-PLL on 27 December 1971. Only days later, it was grounded permanently when serious corrosion was found in the floor, caused by acid from some batteries that had been loaded upside down! The British Defence Attaché did not include any C-46s in his report on the air force in May 1972, so evidently the C-46 was considered permanently retired by then.

The remains of 9T-PLG and -PLL were still to be seen at the military part of N'Djili airport in the early 1980s, so they were obviously not sold on the civilian market but rather just left to fade away. They were scrapped soon afterwards.

Painting and Markings

All the Congolese C-46s carried colour schemes which were basically civilian rather than military. There were some differences between the aircraft, which are listed below as far as possible. None of the aircraft are believed to have carried any markings on the wings (other than walkways, etc.).

9T-PLA: Natural metal with a white top above the windows. A thin dark blue, or possibly black, stripe was painted along the dividing line. From 1965 it carried a Makasi badge behind the cockpit and this was moved to the fin in 1966 (never both at the same time). Initially carried a minuscule registration on the fin, but in 1965 a normal-sized registration was added on the rear fuselage. No photographic evidence of national insignia being carried, but they may have been present towards the end, in 1967.

9T-PLB: Believed to be natural metal with a white top. Dark blue cheatline across the windows. Very small registration on the fin. No other markings.

9T-PLC: Light grey with a white top. Medium blue cheatline across the windows and a thinner stripe in the same colour across the top of the fin and rudder. A Makasi badge was added behind the cockpit after some time. Normal-sized registration on the rear fuselage. No national insignia carried.

9T-PLD: Believed light grey with a white top extending to below the windows. Dark blue cheatline across the windows. Makasi badge on the fin but this was likely removed in the late 1960s. Normal-sized registration on the rear fuselage. No photographic evidence of national insignia being carried, but they may have been added in 1967 or later.

9T-PLG: Natural metal with a white top extending to below the windows. No stripe or cheatline. Red spinners. Normal-sized registration on the rear fuselage. Makasi badge on the fin at one point, but this was removed by 1970. National insignia carried on the fuselage.

9T-PLJ: Natural metal with a white top extending to below the windows. No stripe or cheatline. Probably had red spinners. No Makasi badge known to have been carried. Normal-sized registration on the rear fuselage. National insignia carried on fuselage.

9T-PLK: As for 9T-PLJ.

9T-PLL: Not known but likely similar to 9T-PLJ. 9T-PLL (and possibly also -PLG) could conceivably have been given Zairian national insignia at the very end, but this is quite unlikely.

Modelling the C-46

For anyone wanting to model a Congolese C-46 in 1/72, the old William Bros. kit is the only real option. The kit depicts a standard C-46 and since, at least to my knowledge, there is no conversion kit for the Super 46 available, this limits the modelling subjects to 9T-PLB, 9T-PLC, and 9T-PLD. There were minor configuration differences when it came to numbers of windows and antenna placement, so check photos for details. Note that all had 3-blade propellers.

The Makasi badges on the C-46s were identical to those on the B-26K and can therefore possibly be taken from a B-26K decal sheet, but neither is 100 % correct and the size may not be quite right.

Special thanks to Michel Huart for additional information for this article.

Leif Hellström (SAFCH #786), Sweden.

Captions for Photos on Pages 71-72

1. Aircraft 9T-PLA down behind enemy lines in Manono, in November 1964, with hurried repairs under way. Among the group facing the camera are some American CIA air officers. Note the extremely small registration on the fin; no other markings were carried at this time. (Russ Gentry)
2. A nice air-to-air view of 9T-PLC in 1965, on its way to Paulis on a supply run. This was one of only three "stock" C-46s used by WIGMO. The trim on this aircraft was medium blue. The Makasi badge was not yet in place. Note the absence of markings on the wings. (Luis de la Guardia)
3. A close-up of the nose of 9T-PLC, showing the Makasi badge added after some time in service. In front of the aircraft are some of the CIA and
- WIGMO air crews, with Colombian "Coco" Morantes in the middle. (Juan Peron)
4. Another "stock" C-46 was 9T-PLD, which carries the Makasi badge on the fin in this shot. The fuselage trim was dark blue. (Michel Bernair)
5. The three WIGMO C-46s in service between late 1965 and late 1966, unusually all lined up at N'Djili airport in Kinshasa. They are, in order, 9T-PLA, -PLD and -PLC. Note that all have C-46F style rudders, with two trim tabs: a common modification also on older models. (Herbert Lotz)
6. Despite gallant rescue attempts by a river steamer, 9T-PLC ultimately broke up and sank after ditching in the Congo River in November

1966. Note that the entire bottom of the aircraft had been ripped open. (Jan Hekker)
7. Three of WIGMO's C-46s, or rather Super 46Cs, were former Swedish charter aircraft. 9T-PLG was one of these and was also one of the more colourful Congolese Commandos, with its national insignia, Makasi badges and red spinners. (Michel Bernair)
8. One of the last C-46s obtained by WIGMO, and the last one lost, was 9T-PLK, which was written off after taxiing down into a large ditch in mid 1970. By this time, the Makasi badge was no longer in use. (Jan Hekker)

Curtiss C-46 Commandos of the Force Aerieenne Congolaise

Information marked * is likely but unconfirmed.

Serial	Version	C/n	Previous IDs	Served from	Served to	Remarks
9T-PLA	Super 46C	231	43-47160, N10421, HP-300	c.Sep 64	5 Sep 67	Shot down in error near Goma by FAC T-28C FG-067; crashed in Rwanda.
9T-PLB	C-46F*	?	(ex CIA?)	c.Sep 64	c.Feb 65	Crashed on landing at Paulis, due to hydraulic failure. Wreck burnt.
9T-PLC	C-46D*	22366*	44-78543, XT-830, N8417C, B-866, HP-314, N8417C, N9279L*	Mar 65	15 Nov 66	Ditched in Congo River near Stanleyville after engine failure on take-off. Sank during salvage.
9T-PLD	C-46F*	22513*	44-78690, N62029, 5N-AFB*	c.Oct 65	70	Not repaired after engine damage 15 Oct 69. Further damaged in storm while grounded at Mbandaka.
9T-PLG	Super 46C	26473*	41-12346, BuA 39498, N4084A, SE-CFE, 9Q-CZG*	Sep 67	c.Sep 71	Withdrawn from use. Last confirmed flight, Aug 71.
9T-PLH	C-46(?)	?	(ex CongoFrigo)	Sep 67	67?	Withdrawn from use?
9T-PLJ	Super 46C	26713	42-3580, BuA 39526, N4096A, SE-CFD, 9Q-CRP	Feb 68	16 Apr 69	Had extra large cargo door. Crashed in Congo River near Kinshasa.
9T-PLK	Super 46C	30483	42-96821, N2085A, SE-CFA, 9Q-CWN	c.Aug 68	15 Jul 70	Damaged beyond repair after landing at Mbuji Mayi, when rolling into ditch.
9T-PLL	Super 46C*	?	N...?, 9Q-CWR*	c.Jul 69	Dec 71	Withdrawn from use due to corrosion.

The Korean People's Air Force in the Fatherland Liberation War

Part Six

Rebuilding the KPAF – With a Little Help from Their Friends

Douglas C. Dildy

Little Korea in Big China

At the small town of Yanji, in Jilin (formerly Kirin), the northeastern-most province of the PRC, the KPAF began rebuilding its strength. Yanji had historically been a refuge for the Koreans whenever the peninsula was threatened from the east. Most recently it had been settled by large numbers of Koreans escaping the Japanese in the early part of the 20th Century. Even though they resided in Communist China, the Koreans were allowed to retain their national identity and language and were permitted to establish a Korean-language university, newspapers, and a radio station. Consequently, the town and its surrounding countryside was a predominantly Korean self-governing prefecture within the PRC and was, therefore, the natural location for the KPAF to rebuild “in exile”. Here Gen. Wang Yong established his KPAF headquarters (HQ) and began organizing and building his expanding air arm.

The airfield at Yanji was a primitive former IJAAF facility, featuring a wide dirt runway, no hangars and only five or six brick buildings along the north edge of the base. Its first arrivals were the remains of the KPAF's training establishment, some 30 Yak-11s and -18s, and 15 Po-2 biplanes. While the ancient Po-2s soon became the basis of the “night bomber battalion” (see SAFO #141), the Yaks were supplemented by six additional Yak-18s and 22 Yak-11s from the USSR. While primary training, using the Yak-18s, resumed at Yanji's satellite field about 30 miles (48km) northwest, the Yak-11s were transferred to the city of Jilin to provide advanced training for the 119 North Korean student pilots that also arrived. These were desperately needed to generate the skilled manpower required to reestablish the KPAF as a fighting force.

Shortly afterwards – at the end of September or very beginning of October – the Soviet 304th IAP arrived at Jilin from its aborted deployment to Pyongyang, bringing with it 40 Lavochkin La-9 and a pair of La-9UTI two-seat, dual-control trainers. Since the KPAF had exhausted the USSR's supply of Yak-

9Ps in the Far East, the 304th was ordered to train the “horseless” Korean fighter pilots on the new type. Because of the limited number of *spahrkas* (Russian slang for “twins” [an abbreviation of *spahrennoye oopravleniye* – meaning as dual-controls] as they called the two-seat La-9UTIs) the class sizes were small: eight KPAF students, three of them Yak-9P pilots with combat experience, were initially selected to convert to the radial-engined Lavochkin. (See Note 1)

The KPAF students were scheduled to receive 17 hours of instruction (two hours dual and 15 solo) and graduate on October 10th, followed by a second group scheduled to graduate 20 days later. However, the 304th IAP commander soon reported that because the La-9 “differs from the Yak-9 in that it is a much more technically complex machine during takeoff and landing [the training of KPAF students] has gone extremely slowly.” In fact, during the first week the North Koreans wrecked one La-9UTI and two single-seaters. Consequently, the training completion dates were extended to October 25 for the first group and November 25 for the second.

These two classes provided the cadre to establish a 20-aircraft La-9 fighter regiment (probably reestablishing the 1st FAR, formerly the Yak-9P training unit) based at Yanji. Additionally, when the 56th GFAR was once again withdrawn from combat – having just lost another ten Yak-9Ps in battle – on November 7, additional graduates, along with the rest of the La-9s, were used to rebuild the KPAF's most prestigious combat unit back to a strength of 20 Yak-9Ps and La-9s. (For obvious piloting, maintenance, and command reasons the two types were probably organized into two distinct battalions within the regiment, although this supposition is not confirmed in any source.) Meanwhile the Russians' 304th IAP began training PLAAF pilots at Jilin to in December. (Note 2)

Much less has been revealed in Soviet and Chinese archives regarding the reestablishment of the KPAF's assault aviation arm. It is known that the V-VS provided 80 fresh Il-10s during 1950, of which at

least 26 were supplied before Kim Il-Sung invaded the ROK. In On November 1, the KPAF requested an additional 25 to rebuild its assault aviation force because its 20 surviving Il-10s were no longer suitable for combat. As many as 54 Il-10s – plus eight UII-10s – were supplied by the USSR after the KPAF's withdrawal into China, thus reestablishing the 57th AAR as an operational regiment (and perhaps reequipping the 1st AAR, the KPAF's assault training unit). The *Shturmoviki*, plus a small number of Yak-18 trainers, were based at Fengcheng airfield, about 30 miles (48km) northeast of Andong (formerly Antung), eventually forming the 11th Assault Aviation Division (11th AAD) under Col. Kim Tal-Hion.

In January 1951, the KPAF's two operational regiments (56th GFAR and 57th AAR) were combined to form a "mixed aviation division" (MAD) under Gen. Li Fart. Totalling some 38 La-9s, Yak-9Ps, and Il-10s (according to USAF Intelligence, see Note 3), this unit soon deployed to Sinuiju to begin combat operations. In the meantime, this airfield had undergone extensive repair and improvement with the construction of new fuel, supply, and ammunition dumps as the KPAF's main base, and was now defended by a "bristling array of anti-aircraft artillery." The new MAD (numerical designation not yet known) was stationed at Sinuiju ostensibly to provide air support for the CPVA's ongoing "Third Phase Offensive" (Note 4) that recaptured Seoul on January 4 and was pushing deep into South Korea. Although KPAF aircraft were not seen over the frontlines in daylight, the ground offensive enjoyed limited success, forcing the UNC's Fifth AF to evacuate many of its units, thereby allowing the KPAF a freedom of action that it had not experienced since the previous July.

Back into Battle

During the heyday of the CPVA's "second phase offensive" – which included the recapture of Pyongyang – the Chinese and North Korea armies established a combined HQ on December 4, 1950. Gen. Peng Dehuai, of course, was the overall commander (and political commissar) with KPA Gen. Kim Ung as his deputy. The next month the PLAAF commander, Gen. Lui Yalou, was directed to establish a combined air HQ along similar lines. Established at Andong on March 15, Gen. Liu Zhen – commander of the CPVA's nearly non-existent air force – was appointed as the leader with KPAF

commander Wang Yong as his deputy. The combined air command was to oversee and coordinate combat operations, engineering, logistics, and political functions of the two air arms.

Because Mao had directed priority be given to direct support of CVPA troops, a forward HQ was established at Pyongyang under Gen. Chang Qiankun, the PLAAF deputy commander, to oversee a large scale airfield "rehabilitation" program and logistics build-up effort. Six new airfield sites were chosen in central Korea (Note 5) and three CPVA infantry divisions, five engineer regiments, and 1,000 civilian laborers began work in March. The Soviets supplied 36,000 pieces of PSP and the Chinese shipped in 30,000 tons of concrete, and after some two million man-days of effort, four of them were completed by the end of May.

From these bases the combined air HQ planned to support the CPVA with Tu-2 bombers and Il-10 attack aircraft, as well as provide MiG-15s to defend the bases, logistics network, and front lines. Commensurately, in July Liu Zhen established a Bomber Command (around the PLAAF 8th and 10th BADs, then in training) at Dongfeng airfield and an Assault Aviation Command at Kaiyuan. The latter was based upon the PLAAF 5th AAD and the KPAF's 11th AAD.

At the time the combined CPVAF/KPAF HQ was established, the PLAAF had only one Tu-2, an Il-10, one La-11, and five MiG-15 regiments – totaling some 200 aircraft – operational. However, these were being expanded into five aviation divisions (Note 6) and, although they were assigned to the command on April 25, they remained in training and would not be ready for combat until autumn. The KPAF's contribution was Gen. Li's MAD (56th GFAR and 57th AAR) stationed at Sinuiju, but the Koreans did not grant the combined HQ any authority over their units and all plans for employing them had to be negotiated between Beijing and Pyongyang.

The Heroes of the 56th "Guards Taejon" FAR

Meanwhile, taking advantage of its renewed freedom of action within North Korean airspace, in mid-January the 56th GFAR further deployed (or at least staged) its Yak-9Ps forward to Pyongyang to defend the DPRK's now "liberated" capital. Two KPAF pilots, "Hero Ong" and "Hero Kim" (most probably Kim Gi-Ok), were featured daily by the Communist radio propaganda commentators who

saluted their bravery and audacity in taking their Yaks into the air “to chase American aircraft away from Pyongyang.” Indeed, on January 15 one of them attacked a flight of Douglas B-26 Invaders (452nd BW[L]), but failed to score any hits.

Once Peng’s “fourth phase offensive” spent itself, Gen. Ridgeway launched “Operation Thunderbolt” – the first in a series of limited offensives designed to regain lost territory and push the “front lines” back to approximate the 38th Parallel. On January 25, the US I and IX Corps began pushing the CPVA forces northwards beneath a smothering umbrella of fighter-bombers that ranged as far north as Pyongyang. On the second day of the offensive, one Yak-9P attempted to interfere with USAF F-84s Thunderjets (27th FEG/523rd FES) bombing a railway bridge approximately 20 miles (32km) from Pyongyang.

1st Lt Jacob “Jake” Kratt, Jr., recalled, “The defenses around the bridge were light and the weather was not a factor. It was during my bomb run that someone called out a prop-driven aircraft on the deck, heading for the bridge and firing his guns [at an F-84E just pulling out of his bombing pass]. I had just released my last bomb when I made a quick visual sweep in all directions and, much to my amazement, I saw this intruder about 500 ft [150m] in front of my windscreen going from my right to left. I immediately applied full power to assist in executing a maximum-g turn to the left... [Ahead of me] two F-84s overshot due to excessive speed, so I reduced power and extended the speed brakes to bleed off speed. I already had my gunsight pipper trained on the target, and I fired a long burst. The Yak immediately started burning, rolled inverted and dove into the ground...”

Ten days later, in much the same way, a Yak-9P attempted to interfere with USAF Mustangs (18th FBG/67th FBS) strafing ground targets near Pyongyang. Major Arnold “Moon” Mullins was just pulling up off his strafing pass when he spotted the KPAF fighter and shot it down. A week afterwards, Peng launched his “fourth phase offensive” but, in the face of enemy air attacks, it made little progress against UNC forces and was soon cancelled.

Battling the US Navy

The next appearance of the 56th GFAR Yak-9Ps was ten weeks later (April 21) against a pair of USMC F-4U-4 Corsairs (VMF-312 “Checkerboards”)

from the USS *Bataan* (CVL-29). Four Yak-9Ps – the largest formation seen in nearly six months – were patrolling southeast along the western coastline near Chinnamp’o harbor and Hojong-do island at 5,000 feet (1,525m), in a loose right echelon formation, when they sighted a single Corsair 3,000 feet (1,000m) below, headed inland. This was Capt Philip C. DeLong, an 11-victory WW2 ace (VMF-212 in the Solomons) leading a two-ship armed reconnaissance mission. DeLong’s unseen wingman, 1st Lt Harold Daigh, spotted the Yaks, but he initially mistook them for Mustangs – this allowed the Koreans to jump DeLong, and get some initial, but inconsequential, hits.

“As soon as I was fired on,” DeLong later recounted, “I executed a quick split-S to pick up airspeed... Although two of the Yaks attacked me again from astern [after pulling out of the dive], I was able to turn the tables. While I was in a defensive turn, one of them crossed in front of me from right to left.” DeLong opened fire and the Yak flew right through the streams of 20mm cannon shells, went into a steep dive, streaming smoke, and hit the ground.

Seeing his leader under attack, Daigh immediately pulled in behind the second pair of Yaks and after following them through a 360° turn, pulled up underneath the trailing one. Daigh’s long, accurate burst caught the Yak-9P in the tail, wing root, and rear fuselage. The pilot was just beginning a defensive break when the right wing broke off and the aircraft hit the ground with a big explosion.

As Daigh chased the remaining Yak towards the east, the other survivor dived after him. DeLong told Daigh to break left (he did) and the Yak followed, DeLong damaging it with hits in the cockpit and wing root. As this fighter turned away, DeLong “came up on the lead Yak, the one Daigh had been trailing [and] I opened fire and the rounds converged on the forward part of its fuselage. The aircraft started smoking, turned south, did a split-S and then recovered to the west. I followed it through this maneuver, and continued scoring hits every time I fired. He was trailing thick black smoke, and pieces were falling away. At that point the pilot ceased his evasive tactics... jettisoned his canopy, then baled out, and his aircraft went straight in.”

Douglas C. Dildy, USA.

Notes

1. Although appearing almost identical to the mixed-construction La-7 that finally drove the Luftwaffe from the skies of the Eastern Front in 1944, the La-9 was actually an all-new, all-metal design of the same configuration – a low-wing, conventional gear, radial engine fighter – with a laminar flow wing and a Shvetsov 1,470hp (1,850 for takeoff) ASh-82FN 14-cylinder engine. A contemporary of the Yak-9P it was ten mph (16km/hr) faster, but being some 600lbs (280kg) heavier it had a lower rate of climb. It was more heavily armed, mounting four NS-23 cannon, and had a much greater range, making it superior to the Yak-9 as a tactical fighter and bomber escort, while the Yak was a better interceptor and bomber-destroyer.

2. At Jilin, the 304th IAP was joined by the 401st IAP (at this time an La-7 unit) to form the 297th IAD which began training the PLAAF's 9th FAD

(25th and 27th FARs) on the La-9 in December, 1950. Interestingly, the Soviets provided the PLAAF student pilots with 20 hours on the La-9 during a six-month long training program instead of the short shrift given to the Koreans.

3. FEAF Intel reported the Lavochkins as “La-5s”, but now they are known to have been La-9s.

4. The CPVA's massive counteroffensive against UNC forces took the form of (initially) four “phase offensives”. These were: 1. “First phase offensive” (October 27 to November 2), a series of “spoiling attacks” against ROK and US forces as a signal to US leadership to desist in pushing to the Yalu River. 2. “Second phase offensive” (November 25 to December 9) massive counter-offensive operation to drive UNC forces from North Korea. 3. “Third phase offensive” (December 31 to January 14), CPVA invades South Korea.

4. “Fourth phase offensive” (February 11-18) CPVA attempt's to finally eject UNC forces from South Korea, but it is prematurely terminated due to over-extended and heavily interdicted supply lines.

5. These were two new airfields at Pyongyang with the other four at Namyong-ni (also called Kangdong), Sunchon (also called Pyong-ni), Sunan, and Yongyu. The recovered KPAF airfields that were “rehabilitated” included Heijo airfield at Pyongyang, Yonpo, Wonsan, Anak, Ongjin, Sinanju, and Sinmak.

6. These were the 3rd and 4th FADs with MiG-15s, the 2nd FAD with one MiG-15 and one La-11 regiments, the 5th AAD with Il-10s, and 8th BAD with Tu-2s. The 10th BAD was formed in January, 1951. Three other FADs were forming on the MiG-9 (See SAFO #140) and the 9th FAD was training on the La-9.

Additional Sources

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8. “USAF Korean War Victories by Date,” (Maxwell AFB, AL: Air Force Historical Research Agency) as posted on National Museum of the US Air Force website:

<http://www.nationalmuseum.af.mil/share/d/media/document/AFD-051209-004.pdf>

9. Zampini, Diego, “Mustangs vs Il-10s, Yaks and MiG-15s”, blog posted on <http://www.korean-war.com/Archives/2002/02/msg00052.html>.

Caption for photos on page 38

1. Having exhausted the USSR's supply of Yak-9Ps in the Far East, the 56th GFAR reequipped one of its battalions (squadrons) with the La-9. Forty of these high-performance radial-engine fighters were transferred from the Soviet 304th IAP at Jilin in November 1950. Once operational training was complete in January, the unit was transferred to Sinuiju airfield just across the Yalu River from Andong, China. (Detlef Billig Collection)

2. The PLAAF 9th FAD was also equipped with the La-9. However, the example in the China Aviation Museum – judging by the circular discoloration on the fuselage beneath the PLAAF emblem and the fact that the “Red 06” is on the tail (as opposed to the PLAAF practice of placing the aircraft's number on the empennage) – was most probably a former KPAF example. The PLAAF's La-9s were eventually passed to the PRC's nascent naval air arm – apparently none survived to become museum

pieces. The KPAF-marked La-11 in the background will be featured and discussed in a future SAFO issue. (Yefim Gordon via Doug Dildy)

3. KPAF La-9 “White 102” KPAF La-9 survives in the DPRK “Victorious Fatherland Liberation War Museum”. Here the KPAF's aircraft are wedged into such confined spaces that good photography of the entire subject is impossible. The museum is proud of the fact that over half a million foreigners have visited it in the 60 years since it opened, immediately

following the Korean War, in 1953. Until recently photography has been prohibited. (Author's Collection))

4. The KPAF received one La-9V (after crashing the other) from the

304th IAP. The only known surviving example is located at the China Aviation Museum. A crude two-seat adaptation of the La-9, it was armed with one NS-23 cannon or a 12.7

machinegun. (Yefim Gordon via Doug Dildy)

Addendum

Soviet Aircraft Deliveries to the DPRK: 1949-1950

Having recently been provided with a copy of the Russian series "In the Skies of Korea: The 'Eagles' of Mao Zedong Against the 'Hawks' of Uncle Sam" by Anatoliy Demin (Mir Aviatsii magazine, 2004) by translator Stephen L. Sewell, it is now known the actual deliveries of military aircraft by the USSR to the DPRK during 1949 and 1950. As an addendum to Part I of this series, it is now known that 165 military aircraft were sent to North Korea during 1949. These consisted of:

<u>Nbr</u>	<u>Type</u>	<u>Remarks</u>
12	Yak-9	Basic model: 1,180hp Klimov M-105PF V-12 engine, one one 20mm ShVAK cannon and one 12.7mm machine gun UBS armament; used for training.
9	Yak-9V	Two-seat dual-control trainer, 1,300hp VK-105PF2 engine, one 20mm ShVAK cannon, assigned to fighter aviation training regiment.
42	Yak-9P	Primary combat variant; one 23mm VYa-23 and two ShVAK 20mm cannons; 1,500hp (1,650hp for takeoff) VK-107A engine, mostly assigned to 56 th FAR.
13	Uil-10	Two-seat dual-control trainer, 2,000hp AM-42 engine, two NS-23 cannon and two RS-82/-132 rockets, standard 400kg bombload; assigned to assault aviation training regiment
54	Il-10	Primary combat variant; 1,750hp (2,000hp for takeoff) Mikulin AM-42 V-12 engine; mostly assigned to 57 th AAR
6	Yak-11	Advanced trainer, apparently assigned to fighter aviation training regiment
24	Yak-18	Basic trainer; previous source stated 22 Yak-18s delivered
5	Po-2	Primary trainer; eight-ten of these pre-WW2 biplane trainers were in the KPAF inventory prior to the arrival of the Soviet shipments. Relegated to the Combined Aviation Regiment as liaison aircraft when replaced by Yak-18s

Before Kim Il-Sung initiated the Korean War, these were supplemented by the initial batches of some of the 239 aircraft supplied by the USSR to DPRK in 1950. All other Russian sources report the KPAF inventory to include 79 Yak-9Ps and 93 Il-10s (no breakdown by subtypes provide) when the war began. This means that (not counting attrition replacements) at least 16 additional Yak-9Ps and 26 more Il-10s were supplied during the first six months of 1950.

After the KPAF was virtually wiped out in August 1950, and was withdrawn to Yanji, Jilin Province, PRC, the USSR provided even larger shipments of replacement aircraft. The total shipments of military aircraft by the USSR to DPRK in 1950 were:

<u>Nbr</u>	<u>Type</u>	<u>Remarks</u>
40	La-9	Ultimate variant of Lavochkin's classic WW2 fighter; probably provided by V-VS 304 th IAP, reequipping the fighter aviation training regiment and 56 th GFAR at the end of 1950.
6	Yak-9V	Two-seat dual-control trainer; assigned to the fighter aviation training regiment.
72	Yak-9P	Attrition replacements for the 56 th GFAR; probably provided by the V-VS 84 th IAP (16 of this total were supplied before the war began).
8	Uil-10	Assigned to assault aviation training regiment
80	Il-10	Attrition replacements for the 57 th AAR; 26 of these supplied before war.
22	Yak-11	Advanced trainer, apparently assigned to fighter aviation training regiment
6	Yak-18	Basic trainer; a total of 30 known to have arrived at Yanji, Jilin, PRC.
5	Po-2	Joined the six surviving (of at least 15) Po-2s in the 1 st Night Bomber Battalion.

Douglas C. Dildy (SAFCH #844), USA.

Frank Tinker

Spanish Civil War Ace

Alfredo Logoluso

"When the fighting broke out in Spain in 1936, I was not quite sure which side was fighting for what. I gathered that each was slaughtering the other for being or doing something that the opposite side did not like. After the heroic defence of the Alcazar at Toledo, I was inclined to favour the Rebels. Then came the aerial bombardment of Madrid, and my sympathies swung to the Loyalists".

These are the opening words of American pilot Frank Glasgow Tinker's memoirs published in 1938 in the USA and Great Britain with the title *Some Still Live*. Recent research has proven that this book is one of the most detailed and historically-accurate accounts of the use of aviation in the Spanish Civil War. Seventy years later, *Some Still Live* remains a lively and accurate document presenting real facts and personalities that still ranks as an authentic historical source. This is particularly relevant because it was published early, while the war was still going on. Countless press reports of those times and autobiographies of pilots participating in the conflict, on either side, were often flights of fancy, or were burdened by inventions for propaganda sake or to enhance one's image. They don't stand up to the amount and accuracy of information provided by Tinker's book. Confirmation of much of this information, particularly that concerning the intervention of Soviet aviation, was only possible in recent years when documents in Soviet military archives became available.

Although Tinker's book covers only the first eight months of 1937, less than one quarter of the duration of the war, it has the advantage over similar memoirs written by Soviet, German, and Italian airmen that either relate to the limited time they operated on temporary service, and those by Spanish pilots, both Republican and Nationalist, that cover the whole length of the war, from July 1936 to April 1939, and beyond. Most of the latter books were written and published from three to six decades after the war, and yet they don't achieve the same immediate and proven reliability of the testimonial of the American pilot.

Besides the total intellectual honesty of his writing, Tinker's book is firmly based on the detailed flight log that he wrote and which his commanders had certified. They provide an accurate chronology to the narration. Both for the historians and for readers looking for a truthful report on the Spanish Civil War, Tinker's book is a primary source, technically no less valid than the

best collection of reports from an embassy air attaché or from the operation reports of an air force in combat. To this, one must add the true portrait of the men of the air units in Spain 1937, their life and milieu.

While the primary historical value of Tinker's writings resides in his direct observation of the realities of the Spanish Republic, it is impossible to require of him the same accuracy and reliability about the enemy and their activities. Particularly, as was common to varying degrees in World War 1, World War 2, and beyond, the evaluations of the results of air combat are generally marred by over claiming of successes, sometimes grossly so, for a series of reasons that easy to understand.

Tinker's Victories Claims

During the eight months Tinker served with the Republican Air Force, he was credited with eight individual victories: five Fiat CR.32, one Heinkel He 51, and two Messerschmitt Bf 109. However, most of these claims are not confirmed in the lists of losses on the corresponding dates and circumstances as found in the archives of the Italian Aviazione Legionaria, German Condor Legion, or Spanish Aviación Nacional.

This should not be a surprise, because the same problem exists for the victories claimed by Spanish Nationalist, Italian, and German pilots. An unpublished study based on original archive documents (like the collection of the Jefatura del Aire, Primera Sección - Información, from the Archivo Histórico del Ejército del Aire at Villaviciosa de Odón near Madrid and especially the OMS papers at the Ufficio Storico dello Stato Maggiore of the Ministero dell'Aeronautica in Rome) allows a reconstruction of the results of all air combats in Spain between July 17, 1936 and April 1, 1939, statistics show that when two or three victories were officially declared as 'confirmed', the Republic only lost one aircraft. The corresponding level of over claiming by Republican Aviation was higher, compared to the actual combat losses reported by the Aviación Nacional, Aviazione Legionaria, and Legion Condor.

Verification of the victory claims of American pilot Tinker confirms the common trend of pilots to overestimate the results of aerial combat.

First Claim

March 14, 1937, morning, area Guadalajara-Brihuega: claim of a Fiat fighter shot down while flying

I-15 '56'. No Fiats were reported lost on March 14, 1937.

Fifteen I-15 fighters of "Escuadrilla Lacalle" took off from Guadalajara with Tinker leading the third flight. They met five CR.32 of 3^a Squadriglia Caccia of the Italian Aviazione Legionaria with Cap. Mario Viola as leader, and five CR.32 of the 5^a Squadriglia of Cap. Armando François. The Italians had taken off from Soria to provide cover for the Corpo Truppe Volontarie engaged on the Guadalajara front. (Note 1)

When the Republican pilots spotted the Fiats they jettisoned their bombs to be ready for combat, thus the CR.32s accomplished their mission of protecting the Italian troops. Air combat began around 10 a.m., in bad weather, The I-15s hit three CR.32 of the 3^a Squadriglia, the first squadron to be engaged, two of Fiats being 'seriously damaged', with pilots Cap. Viola and Serg. Galadini, the latter wounded in the right arm (see Combat Report, Caccia A. L., 14/3/37, F.do OMS, US-SMA, Cart. 96). Tinker could have hit the fighter of squadron commander Viola, who was attacked from the back but escaped with a voluntary spin. In his book, Tinker wrote that he shot his adversary from behind and saw him spinning to the ground trailing black smoke. He does not report having seen the actual crash.

Italian pilots from both squadrons believed they had shot down enemy fighters, but the "Escuadrilla Lacalle" did not suffer any loss that day. However, due to the bad weather, Tinker did not return to his departure field. Instead he landed at Manises airport, near Valencia, almost 300 km south-east of Guadalajara. The other American flight leader, Harold Dahl, landed at Albacete, having flown south almost 200 km.

Second Claim

March 20, 1937, late afternoon, Cifuentes-Brihuega: claim for an individual victory over a Fiat fighter, flying I-15 '56'.

Twenty-seven I-15 of squadrons "Lacalle" and "Kozakov" took off from Guadalajara and Algete and around 5 p.m. clashed with fifteen CR.32 of the Aviazione Legionaria: eight from 2^a Squadriglia lead by the commander of the I Gruppo Caccia, Ten.Col. Chiappini. The Fiats had taken off from Soria at 4 p.m. as direct escort to 11 S.81 bombers and five Ro.37 attacking Brihuega. Also in the vicinity were four Fiats from 3^a Squadriglia, lead by Cap. Viola, and three from 4^a Squadriglia of II Gruppo Caccia, lead by Ten. Monti, that took off from El Burgo de Osma respectively at 4.15. and 4.20 p.m.

Five CR.32 with Chiappini leading were bounced by some twenty I-15 lead by Lacalle, Tinker, Dahl, and the

Soviet squadron leader Osadchij. They attacked from higher altitude above the clouds with strong tactical and numerical superiority. Two Fiats were shot down over enemy territory near Brihuega. Serg. Magg. Gamba took to his parachute and managed to walk back to the Nationalist lines two nights later, badly frost-bitten, but Serg. Magg. Scala was killed. Tinker could have shot down the CR.32 of Scala (c/n 275, one of the first to be shipped to Spain in August 1936) because in his book he doesn't mention a parachute and reports the crash of his adversary.

On this occasion, Republican pilots claimed three fighters shot down. The third one was probably Serg. Novelli, who had his water radiator pierced, and made an emergency landing near Torremocha, turning over; the pilot was slightly wounded in the forehead. In addition, the CR.32s of Ten.Col. Chiappini and Serg. Magg. Bellò were badly shot up and they landed respectively at Soria and Torremocha.

Five Italian pilots claimed to have shot down five 'Curtiss' fighters, although only one I-15 was lost. This I-15 was the eleventh air victory of Serg. Magg. Montegnacco of 3^a Squadriglia, who shot down Manuel García Granados (aka Gómez García), a mercenary pilot from Guatemala, who took to his parachute from his burning plane and was captured north of Brihuega near Almadrones. (Note 2)

Ten.Col. Chiappini was held responsible for the bad results of that combat both by his subordinates and his superiors. He was replaced and sent back home, like many other officers of the CTV, in the purge that followed the failure of the Guadalajara offensive.

Third Claim

17 April 1937, morning, Teruel area: claim for the individual destruction of a Heinkel fighter, flying I-15 n. 58.

Two He 51 fighters of the Aviación Nacional (Grupo 1-G-2, Escuadrilla 2-E-2), were lost during an air combat over Teruel on the morning of April 17, 1937: one from a collision in flight with an I-15, both pilots being killed, the Nationalist Palmero and the Republican Calvo. Another He 51, hit by an I-15, was destroyed in a forced landing near the lines; its pilot Allende survived.

The Republican pilots in this action claimed the 'confirmed' destruction of four Heinkel fighters. Besides one assigned to Tinker, the commander of the Soviet squadron, Osadchij, claimed two victories and the Spaniard Comas one. The actual Nationalist losses were one fighter shot down and one lost from the midair collision.

Fourth Claim

June 2, 1937, afternoon, area Segovia-Guadarrama: claim for the individual destruction of a Fiat fighter, flying I-16 '70'.

On this day, Republican pilots claimed six CR-32 shot down. No Fiats were lost on this day, although five CR.32 did return with slight damages from enemy fire.

Late in the afternoon of 2 June, twelve I-15 from "Escuadrilla Zorki", with Soviet pilots under the command of squadron leader Zotsenko, and thirteen I-16 from two Soviet squadrons, with Tinker among them, took off to escort light bombers R-5 of Grupo 15 and R-Z of Grupo 20 supporting the Republican offensive on the Segovia-Guadarrama front.

About the same time, eighteen CR.32 from XXIII Gruppo Caccia of the Aviazione Legionaria (six of the 18^a Sq., three of the 19^a and nine of the 20^a) in two groups led by Captains Nobili and Larsimont (respectively commanders of the squadrons 18^a and 20^a) took off from Olmedo airfield. The first group took off at 4.45 p.m. on a protective patrol, the second one at 5.15 p.m. on a mission to protect Ro.37 light bombers of Grupo 1-G-12 of the Aviación Nacional.

In the combat that followed, the Italian pilots optimistically claimed the individual or collective destruction of ten "Curtiss" (I-15), two "Rata" (I-16), and three single-engine light bombers "Douglas" (R-5 or R-Z). Actually, squadron leader Zotsenko fell in that combat (shot down by Cap. Nobili) while nine I-15s from his squadron returned with damage, one breaking up on landing, with Russian pilot Ilhin suffering severe wounds. Also shot down were an I-16, its Soviet pilot jumping by parachute over friendly territory, and two R-5s, one of which with American pilot Finick who was wounded and jumped along with his gunner. Another American pilot, from a Soviet fighter squadron, returned wounded to his base.

Fifth Claim

June 16, 1937, morning, area Huesca: claim for the individual destruction of a Fiat fighter, flying I-16 '23'.

No CR.32 was lost in combat on June 16, 1937, either belonging to the Aviación Nacional, then operating on the Huesca front, where Republican pilots optimistically claimed five Fiats shot down, or belonging to the Italian Aviazione Legionaria, which Tinker mistakenly believed was his opponent.

Sixth Claim

July 13, 1937, afternoon, area Madrid-Brunete: claim for the individual destruction of a Messerschmitt fighter, flying I-16 '23'.

No Messerschmitt Bf 109 is known to have been lost in combat on July 13, 1937, although the Republican pilots optimistically claimed four "monoplanos" shot down in afternoon air combat on the Madrid front. While not supported by documents, recent writers assigned to Tinker the destruction of Bf 109 codes 6-4, causing the death of Uffz. Hoeness of Staffel 2.J/88. However, this pilot was killed in combat the previous day near the town of Villaverde south of Madrid. Tinker's action on the 13th took place west of the capital. Bf 109 coded 6-4 was written off on a different event when its pilot crashed on landing. While Hoeness' aircraft was reported as crashing vertically into the ground.

Seventh Claim

July 17, 1937, late afternoon, area Madrid-Brunete: claim for the individual destruction of a Messerschmitt fighter, flying I-16 '23'.

No Messerschmitt Bf 109 is recorded as lost in combat on July 17, 1937. One Messerschmitt was damaged in an emergency landing near Escalona del Prado because of engine failure. Its pilot was the commander of Gruppe J88, Hptm. Handrick. This event cannot be related to Tinker's action, because the American pilot related that he saw the enemy pilot jump with his parachute.

Eighth Claim

July 18, 1937, late afternoon, area Madrid-Brunete: claim for the individual destruction of a Fiat fighter, flying I-16 '23'.

A Fiat CR.32 of the 26^a Squadriglia, XVI Gruppo Caccia of the Aviazione Legionaria, is recorded as lost in combat in the evening of July 18, 1937, on the Madrid front, with the death of its pilot Ten. Mollo. Tinker reports that the Fiat he hit crashed into the ground at high speed.

However, this victory cannot be attributed with certainty to Tinker because the Republican pilots who took part in that action claimed seven Fiats shot down that evening's dogfight, as reported in the official bulletin of the Republic. This combat involved thirty-two I-15 and I-16 fighters escorting nineteen R-Z light bombers and twenty-eight CR.32 of the XVI Gruppo Caccia under the command of Magg. Casero, with squadron leaders Brambilla of the 24^a, François of the 25^a, and Ricci of the 26^a, and lasted about one hour, from 7 to 8 p.m. over Madrid, El Escorial, Valdemorillo, Brunete, and Navalcarnero. Italian pilots claimed the destruction of eight "Pappagalli" (as the R-5, R-Z, and Aero 101 light bombers were often called),

five "Rata", and one "Curtiss". The real victories of the XVI Gruppo were four R-Z of the 2^a Escuadrilla of Grupo 30, with all Spanish crews recovered, except for the Austrian gunner Feld, who died of his wounds, and two I-16, with the death of Soviet pilot Dolghij and another pilot unharmed.

Out of the eight individual victory claims accredited to Tinker, only one is historically proven (the Fiat fighter on March 20, 1937), two can be assigned to him with reservations (a Heinkel fighter on April 17 and a Fiat on July 18, 1937) as there were further conflicting claims from other Republican pilots.

Tinker earned during his engagement in Spain exactly 20,000 dollars, 12,000 of basic contracted wage for eight months of service, and 8,000 as extra bonus for the eight individual victories assigned to him. Not much, considering that an I-16 fighter cost the Spanish Republic 40,000 dollars, a fair exchange.

Two years after the end of his Spanish adventure, and one year after his book was published, Frank Tinker died in a manner worthy of a novel. He was found dead on his bed in a hotel room in Arkansas, killed by a gunshot to the belly. None of his relatives or friends believed it was suicide, and the only engraving on his tombstone is two words in Spanish: ¿QUIEN SABE? (Who Knows?) denoting the unsolved riddle of his death.

Finally, a Biography of Frank Tinker

A biography of this extraordinary individual did not appeared in the United States until 2011, much later than one would expect from American publishing that is usually very interested in the aviation history of the United States and its men.

In 390 pages, *Five down, no Glory. Frank G. Tinker, Mercenary Ace in the Spanish Civil War*, by Richard K. Smith and R. Cargill Hall, Naval Institute Press, recounts the brief and intense life of this pilot. It basically follows the 280 pages of Tinker's book, but with sizeable sections on the time before, during, and after his stay in Spain, and a large body of explanatory and bibliographical notes, with maps and illustrations.

The main value of this book, besides its worthy and neglected subject, is the amount of research to represent a fascinating historical scenario, among the events and personalities that interacted with the protagonist, enriching the narrative with notes and detailed descriptions of events, aircraft, and men, particularly the American mercenary airmen hired by the Spanish Republic.

This trend to elaborate on Tinker's text can be a limit to the narrative, as the authors stumble with some

inaccuracies and errors, as can happen when the quantity of information prevails on historical quality. For example, on page 67: "... Italy sent more than 2,000 aircraft to Spain..." quoting as source a recent Spanish book that, however does not report this figure. This is double the historically-proven quantities.

Another example is that the Soviet commander of the I-15 squadron in which American pilot Baumler served since January 1937 and Tinker later in May, is identified wrongly as Ivan I. Kosenkov, born in 1911, "returned in the USSR at the end of August 1937 after a period of about ten months in Spain " (pp. 131, 381). Actually, Kosenkov was flight leader in a squadron of I-16 that left for Spain at the end of May 1937 and he served there until January 1938. The commander of the unit flying I-15 to which Baumler and Tinker belonged was Aleksandr P. Osadchij, born in 1907, in Spain from January to July 1937 (A. P. Osadchij, "Vmeste s Patriotami Ispanii", Kiev, 1986).

Like other Soviet airmen operating in the Republican Aviation, Osadchij used a phony identity during his service in Spain, with the cover name "Kozakov", spelled as "Kosakoff" by Baumler and "Kosokov" by Tinker. It seems that Smith and Hall confused, due to their similar sounds, the *nom de guerre* of the Soviet squadron leader with the real name of Kosenkov. (Note 3)

Smith and Hall make the historically unproven assertion is that Tinker was assigned the command 'in flight' of a whole squadron of I-16 fighters with Soviet pilots, during the Battle of Brunete, in July 1937 (p. 270): "... probably the only case in the history of the Air Force of the Red Army when an American 'licensed at the U.S. Naval Academy' had lead in combat a Soviet squadron". Tinker does not reports this fact in his memoirs. However, being an experienced pilot, Tinker flew as flight leader for less expert Soviet wingmen assigned to his unit, but without assuming command in flight of the whole squadron.

Other sundry inaccuracies can be found in this book, often stemming from the use of outdated Anglo-American books on the Spanish Civil war. The reader, therefore, must employ caution, but overall it is an interesting and useful book. Thanks to the work of many years of the authors, mainly R. K. Smith, the story of Frank Tinker, the 'pilot of venture', and of the epochal events that were the background to his experiences, are presented to a wide readership.

Conclusion

More than one century after his birth, Frank Tinker has been shown not only to be an "ace" flying for the

Republicans in the Spanish Civil War, but also an exceptional writer and told a lively story that reads like a novel, but which time has proven to be a truthful historical document.

Alfredo Logoluso, Italy.

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Notes

1. Bad weather seriously hampered Italian fighter, which were forced to operate from unfit airfields, far from the frontline, with mountains often covered by clouds on the way, while the air forces of the Republic were at an advantage, as they used large
- airfields close to the area of operations, without natural obstacles to their frequent sorties to harass Italian troops.
2. With the rank of Colonel, García Granados had lead the Air Force of Guatemala from 1931 to 1933.
3. The Americans, Italians and Germans also used *nom de guerre*. For example, Frank Tinker was "Francisco Gómez Trejo".

MARCH					1937		
Fecha	Piloto	Tipo y número del avión	Pasajero	Tiempo	Lugar	OBJETO DEL VUELO	OBSERVACIONES
6	Self	Mosca #56	None	1:05	Madrid	Defense of Madrid	2 Bombers Repelled
7	"	"	"	:30	Guadalajara	Three Junkers over field	Got Away
9	"	"	"	:35	"	Paloma Blanco	"
11	"	"	"	:20	"	Bombardment across lines	Plane unbuttoned
11	"	"	"	2:00	"	"	Retreated to field
12	"	"	"	2:00	Albacete	country to Guadalajara	with Gen. Douglas
12	"	"	"	:30	Guadalajara	Bombardment across lines	Not so good
12	"	"	"	:40	"	"	"
13	"	"	"	:45	"	Reconnaissance	Saw 3 Bombers
13	"	"	"	:45	"	Bombardment M.G.	one shot down
14	"	"	"	2:15	"	Dogfight	Shot one Fiat
15	"	"	"	:45	Valencia	To Albacete	None
15	"	"	"	1:45	Albacete	To Guadalajara	"
16	"	"	"	1:10	Guadalajara	Bombardment & Protection of Bombers	"
16	"	"	"	:50	"	Junkers over lines	Too Late
16	"	"	"	:30	"	"	2 AA Holes in Prop
18	"	"	"	:30	"	"	Too Late
18	"	"	"	1:35	"	Protection of Bombers	Bombers Protected
19	"	"	"	:20	"	Reconnaissance - forced	Back by O Ceiling
19	"	"	"	:30	"	"	Successful
20	"	"	"	:25	"	Junkers over Lines	Not sighted
20	"	"	"	1:45	"	Protection of Bombers	O.K.
20	"	"	"	1:50	"	" (Dogfight)	Shot down one Fiat
23	"	"	"	:30	"	Heinkel over Campo	Too Late
Total				23:40			
Total				41:20			
Total				65:10			

* Blanche
† Gómez (Landed Badly Wounded)

Pages from Tinker's Spanish flight log detailing sorties flown by the American pilot during March 1937, all with I-15 '56'. Note Tinker calls "Mosca" the I-15 fighter, a name later used in Republican Spain to indicate the I-16. Initially between November 1936 and September 1937, I-15 and I-16 were often named in Republican Spain as "Mosca" (fly) or "Chato" (flat nosed) indifferently, both aircraft being of quite reduced dimensions and having flat cowling due to their large air-cooled radial engines. The I-16 was also called "Mono", by Tinker too, referring to it as the "monoplane" fighter. From September 1937, when a standard nomenclature was adopted, the name "Chato" was normally used to indicate the I-15 and "Mosca" the I-16.



Frank Tinker on board of an I-15 fighter in spring 1937.



Men of I-15 "Escuadrilla Lacalle" at Guadalajara air base in March 1937. Tinker is the first standing from left. Beside him standing from left are Spanish mechanic Scapa and pilots José Riverola Grúas, Gerardo Gil Sánchez, Ramón Castañeda Pardo, Andrés García Calle (called "Lacalle", squadron commander), Eusebio Fernández Velasco. Bottom from left are pilots José Bastida Porras, the American Harold Evans Dahl, José Selles Ojino, Augusto Lecha Vilasuso.



I-15 '56' flown by Tinker on 20 March 1937 when he shot down Fiat CR.32 'C-275' of Aviazione Legionaria's 2^a Squadriglia Caccia killing Italian pilot Serg. Magg. Michelangelo Scala near Brihuega on Guadalajara front. The Italian pilot, Serg. Magg. Michelangelo Scala, was killed. This I-15 reached eastern Spain end December 1936 in a batch of 30 such fighters sent from the USSR via the Black Sea on Spanish Republican ship "Darro".



I-16 '23' flown by Tinker during the Battle of Brunete battle west of Madrid in July 1937. He was flying with a Soviet fighter unit led by Lt. Ivan Alekseevich Lakeev. This machine was one of first 31 I-16s sent to Spain from the USSR in October 1936, arriving with the second batch of such fighters on the Soviet ship "Blagoev" unloaded at Cartagena by November 4th and assembled at Alcantarilla.



Tinker's adversaries: Aviazione Legionaria Fiat CR.32s of 3^a Squadriglia Caccia, led by Cap. Mario Viola, at Seville Tablada air base spring 1937. They being prepared before their assignment to operations on the Madrid and Guadalajara fronts.



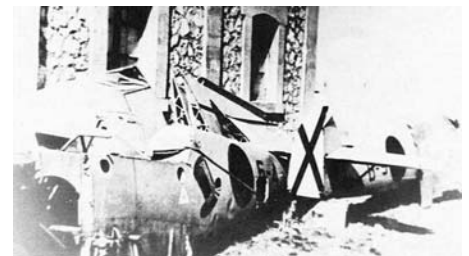
Tinker's adversaries: Aviazione Legionaria Fiat CR.32s of 2^a Squadriglia Caccia, led by Cap. Guido Nobili, operating from Soria air base in March 1937 on Guadalajara front.



Tinker's adversaries: Spanish Aviación Nacional Heinkel He 51B, '2-53' at Seville Tablada air base in late spring 1937. This machine arrived in Nationalist Spain by October 1936 and was initially assigned to Grupo 1-G-2.



Tinker's adversaries: Legion Condor early production Bf 109, '6-4', assigned to Staffel 2.J/88 between spring and summer of 1937. This machine arrived in Nationalist Spain in January 1937 and was initially flown by Lt Kurt von Gilsa with Staffel VJ/88. Sometimes in English literature it has been reported shot down by Tinker near Brunete on 13 July 1937, while flown by Uffz. Hoeness: but this German pilot died one day before.



The wreck of Bf 109 '6-4' at the Nationalist air base of León after a crash landing late in 1937. Damage on fuselage shows this could not be the machine flown by Uffz. Hoeness when he was killed on 12 July 1937, because his fighter went down vertically from an altitude of 2,500 meters (8,200 ft) and violently impacted the ground being totally destroyed.

OVER CENTRAL AMERICA:

THIN OUTLINE TO LETTERS

Blue/white/Blue
with Blue star

Darker
border
to band

(REAR DOOR)

(to same scale)

314

"314" PROFILE
UNFINISHED

← BLUE (:) TRIM
TO NOSE

BLACK.

DARKER GRAY
AREA BY DOOR

BLACK UNDER
FUSELAGE??

BLUE(?)
FR 104

BLACK ON NATALIE

← BLACK
DE-ICER
STRIPS ON WINGS

NO BLACK
STRIP -

Darker border
to band

TAIL CLOSE-UP
MISSING

NOTE: ANGLED
FIN MARKINGS-
(SMALL "FAH")

PROPORTIONS OF
FUSELAGE STRIPES
ON "FAH 305"

NO PROP WARNING ↗

SEGMENTED TRIM LINE
| ABOVE WINDOWS ↓

② (PRESUMABLY STANDARD INSIGNIA BANDS ON WINGTIPS)

TAIL/RUDDER DESIGN BLUE?

REPAINT

DARKER GRAY AREAS
WHERE PREVIOUS INSIGNE OVERPAINTED

↑ OVERPAINTING
COVERS PART OF
PROP WARNING STRIPE

STARBOARD UPPER WING
MARKINGS APPROXIMATE

[NOTE: NUMBERS EXTEND
FURTHER TO TIP → T

(NO WINGTIP INSIGNIA BANDS
ON CAMOUFLAGED UPPER SURFACE)

OTHER AIRCRAFT

FAH 306: CAMO WRAPS AROUND NOSE (2 FUS.?) AND
NACELLES. HAS UNDERWING INSIGNE BANDS.
FAH ____?: WRAP CAMO, BUT NO UNDERWING BANDS.

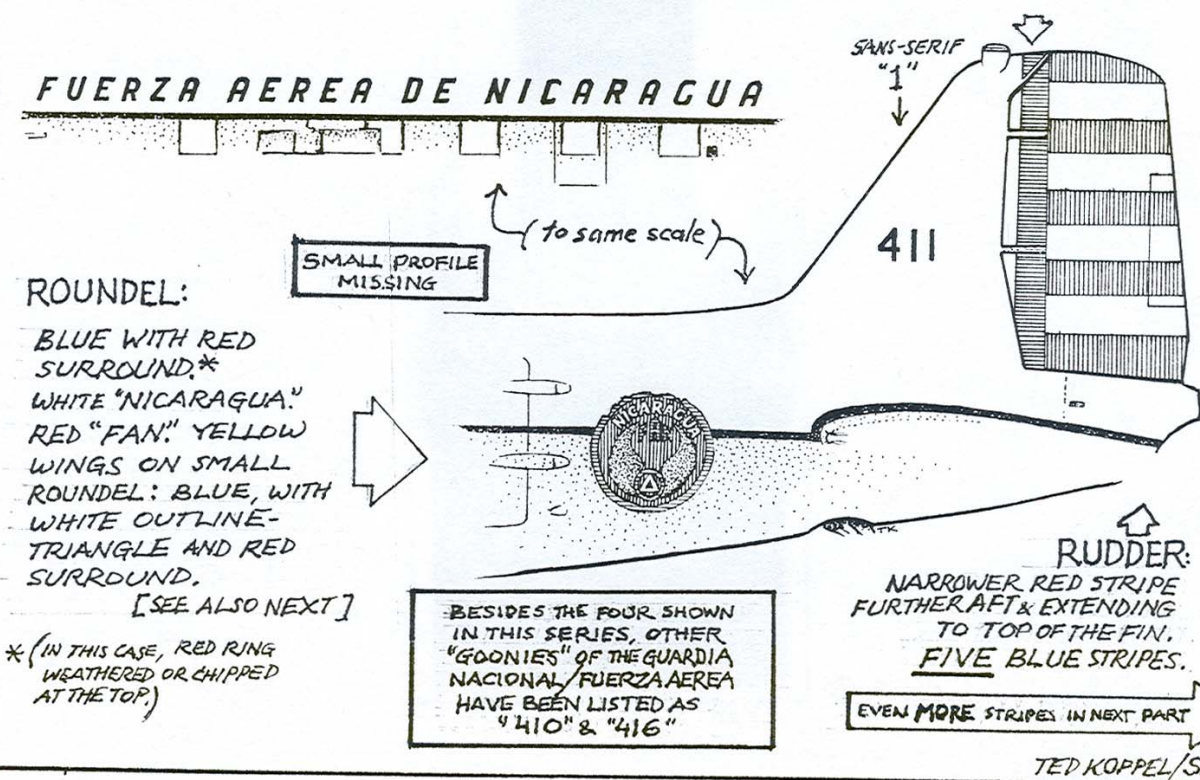
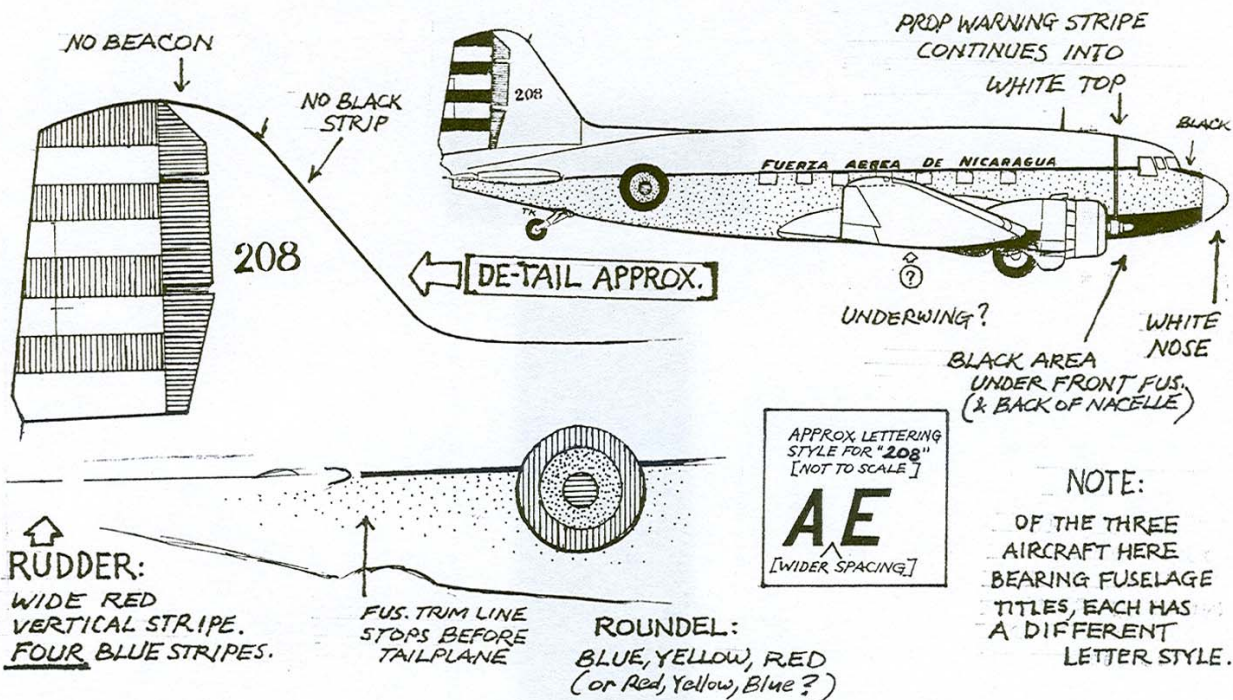
TED KOPPEL/SAFO

UNFINISHED PROJECTS FILE

TAILS of the GOONEY-BIRD (6)

OVER CENTRAL AMERICA:

NICARAGUA - I. [pre-SANDANISTA AIRFORCE]



UNFINISHED PROJECTS FILE

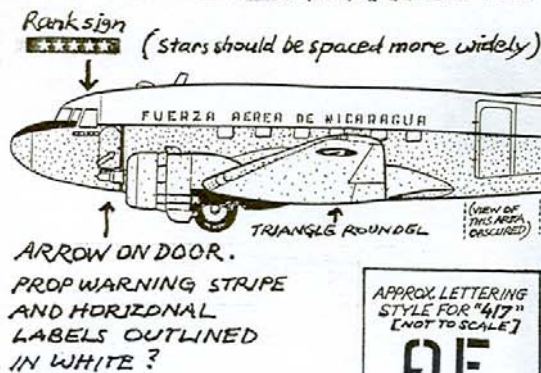
TAILS of the GOONEY-BIRD (7)

OVER CENTRAL AMERICA:

NICARAGUA - II.

[pre-SANDINISTA AIR FORCE]

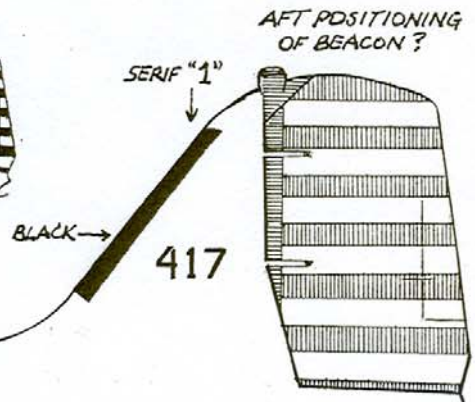
PRESIDENTIAL AIRCRAFT OF GENERAL SOMOZA



FUSELAGE VERSION WOULD HAVE SOME VARIANCE IN LETTER STYLE AND IN THE WINGS/FEATHERS.



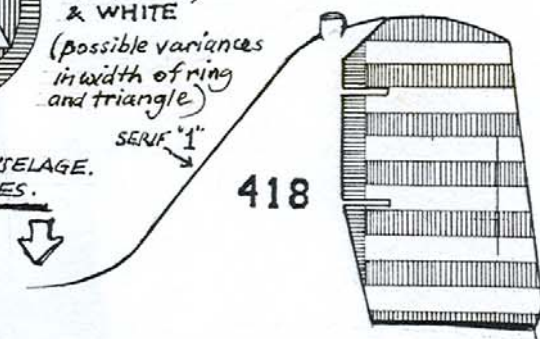
"418" - BLACK AREA UNDER FORWARD FUSELAGE.
- NO FUSELAGE ROUNDELS OR TITLES.



RUDDER: ⬆

VERY NARROW RED STRIPE TO FIN & BEACON.

SIX (2 1/4) BLUE STRIPES. (white stripes slightly wider.)

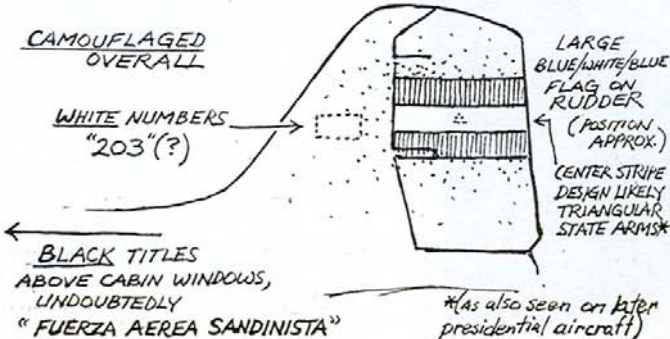


RUDDER: ⬆

NARROW RED STRIPE*

SIX (2 1/3) BLUE STRIPES. (*NOT TO FIN-TIP)

BRIEFLY GLIMPSED ON T.V.: June 22, 1983



TRIM STRIP WRAPS OVER TAILPLANE (AS ON "411", BUT NOT ON "417")

NEXT STOP: PANAMA

TED KOPPEL/SAFO

Dutch ECM in WWI

Frits Gerdessen

At the start of the First World War radio was still in its infancy, but early in the war a direction finding system was introduced in Holland to locate illegal transmitters. An unexpected side effect was that German Zeppelins, violating Dutch neutrality, were also plotted.

After the first Dutch coastal radio station had been built in 1904 (Radio Scheveningen) soon more stations followed, and the Navy also introduced wireless. The army started to work with wireless just before WW.1.

Around 1910 a number of amateurs started to experiment. They built their own receivers, the parts for which they had often to make themselves. Initially listening was forbidden, but early 1914 they could get a licence to possess and use a radio receiver. On 11 July 1914, the possession and use of receivers was allowed without a licence, but not for long. On 5 September, soon after WW.1 started, listening was forbidden to private persons and their receivers were confiscated. Despite the ban, several amateurs continued to listen.

By that time engineer Hanso Henricus Schotanus à Steringa Idzerda (1885-1944), better known as IDZ, one of the amateurs, had started the "Nederlandsche Radio Industrie". He parts for receivers, not so much for amateurs as these mostly made parts for themselves.

Unexpectedly, soon after the start of WW.1, IDZ was asked for help by kapt. G.J. Kniphorst, who commanded the "Militaire Luisterdienst" (ML = Military Listening Service). Kapt. Kniphorst was a naval Lieutenant, one of the navy's wireless pioneers. He was transferred to the army. Spies were quite active in neutral Holland, and apparently some used wireless. IDZ was asked to build some direction finding (RRZ = Radio Richting Zoeker = Radio Direction Finding) stations. The ML wanted to check foreign and clandestine transmitters. IDZ consulted his fellow amateurs and one concluded that the aerial system Bellini Tosi - two aerials in a right angle, with crystal receivers, might do. The first RRZ was built at Delfshaven, north of Rotterdam. (Note 1) After some experimenting, the system worked satisfactory. It turned out one had to work with two

receivers, one coupled to the DF system, the other to a normal antenna. Once a signal was received on the normal antenna, the operator started to listen on the DF system. He listened with one headset, with an earpiece for each receiver. It took some time to train the operators.

Now five more RRZ were ordered, but these were (much cheaper) built by the Militaire Radiodienst (Military Radio Service) in the workshop of Anton Veder (1879-1928) in Rotterdam. Res.sgt. A. Veder was a prominent radio amateur, as well as director of a bank in Rotterdam. He became deputy of kapt. Kniphorst, and fulfilled his military service at home, which was guarded by marines. His wireless set was available to the army.

Four more RRZ's were built, at Schoorl, Rolde, Herten, and 's-Heerenberg. Kapt. Kniphorst established his control room in Utrecht where he received the plotting cards and gave orders for special operations. The RRZ stations listened to permanent and mobile stations (ships). Most had call signs. With the observations of two or three RRZ's the transmitters could be pinpointed. In case of clandestine transmitters radio trucks were used to track and catch them.

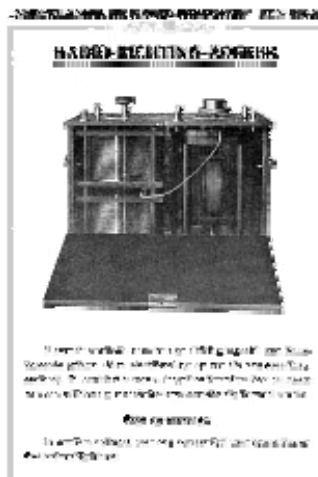
As was to be expected, the RRZ's soon plotted mobile transmitters. Some of these were ships in the North Sea. Other were mobile transmitters moving over Holland during the night. These were Zeppelins, returning from a sortie to England. Outward bound they went north of the country over the North Sea, but on return they often took the shortest route over Holland. Their route could be exactly plotted.

Late in 1915, the Dutch government protested to the German Gesandtschaft, which flatly denied the flights. When the plotting diagrams were shown to them, the embarrassed answer was: "Wie haben Sie das gemacht" - How did you do this. (Note 2)

Thereafter, the Zeppelins avoided Holland except in emergencies and special signs were introduced for these cases. The RRZ's now could also establish which Zeppelins had been lost once their call signs were no more heard. (Note 3) The neutrality violations by Zeppelins were mentioned in the press, and documents remain of diplomatic protests.

At the end of the war, the RRZ system was shut down. It was no secret then, as the Nederlandsche Radio Industrie (IDZ) advertised the system, "which had been built for the Militaire Radiodienst". Whether any sets were sold is not known. The RRZ records no longer exist. Only a few documents mention the system and its commander. The available information is based on a newspaper article of 1936 by IDZ. Also, information on the early radio amateurs and their connection with the RRZ system is available on the Internet.

Frits. Gerdessen (SAFCH #12), Netherlands.



Notes

1. The Italian engineers Ettore Bellini and Alessandro Tosi developed their direction finding system in 1907, but it took some years before it could be used in practice. By then the system was well known, and used both in Germany and England. Both countries built a large number of DF and transmitter stations. In Germany Telefunken had acquired the Bellini-Tosi patents.

2. The Germans were clearly surprised by the Dutch action, most likely because they had not expected it. In Germany the DF installations were most important to monitor fleet and airship movements, and vector Zeppelins to their targets in England. In England it was the same, and here the Zeppelins were also plotted, with the result that aircraft could more or less

be vectored to their targets. The Zeppelin crews soon learned to be careful with their wireless. Once they had DF equipment on board they could plot their position and the use of the wireless was much reduced.

3. However, when Fregattenkapitän Peter Strasser, commander of the naval airships, set out for an attack on England with L70 on 5 August 1918, he did not observe radio silence. The L70 was plotted and intercepted and shot down by D.H.4 A8032 (Major Egbert Cadbury and gunner capt. Robert Leckie). All 23 crew were killed.



Photo at the left: Staff of the Telegraafafdeeling (Telegraphy unit) in the Hoofdkwartier Veldleger (Field Army HQ). From left standing: 1st Lt. (engineers regt.) Heshuijsen, chef Telegraafafdeeling, Kpt. G.J.Kniphorst, chef Radiodienst Veldleger (Field Army Radio service). Kpt. Schreuder (engineers regt.), chef Telegrafie H.V. (Field Army HQ)



Res.sgt. A. Veder, sitting at left, with an RRZ crew, likely at Delfshaven.

Bell 214B “BIG LIFTER” of the Aviation of the Ecuadorian Army

Jorge Delgado

In the 1970's, Bell Helicopters developed a civilian derivative of their Model 214A; the Model 214B “Big Lifter”. The Model 214B included search and rescue windows in the doors, an engine fire extinguishing system, and civilian avionics. It was configured for such rolls as passenger transport, “Flying Crane” with an external wench, or for fire fighting. The Model 214B was certified in early 1976, but there were few sales. Small numbers were sold to Iran, Dubai, Ecuador, Oman, and the Philippines. Production ended in 1981.

In the middle of the 1970's, the Ecuadorian army purchased for the Servicio Aereo Del Ejercito their first helicopters: French Gazelles, Alouettes, and Lamas. From the US, they purchased Bell 47 for primary training, and for heavy-duty work in the jungle two Bell 214B factory serials 28030 and 28031. These latter were given s/n E-451 and E-452 and were assigned to Air Group 42 “Balbina”.

During the 1981 “Paquisha” conflict with Peru, the 214B's were the work horses of army air arm

delivering supplies to the garrisons involved in the dispute. When the hostilities ended, they continued serving all over the country where ever they were needed.

On 1 June 1989 during a regular flight from Lago Agrio to Cascales, the Ecuadorian 214B experienced their first and only mishap. Bell 214 E-452, with Lieutenants Ortega and Sanchez and the controls along with five occupants, crashed in the thick of the Amazon jungle with the lose of the E-452 and all aboard.

The remaining 214B, E-451, continued to serve until it was sold to one of the airline companies operating with the oil companies in Amazonia until it was replaced by a more modern helicopters with a greater lifting capacity, the French Aeroespaciale 330 Puma.

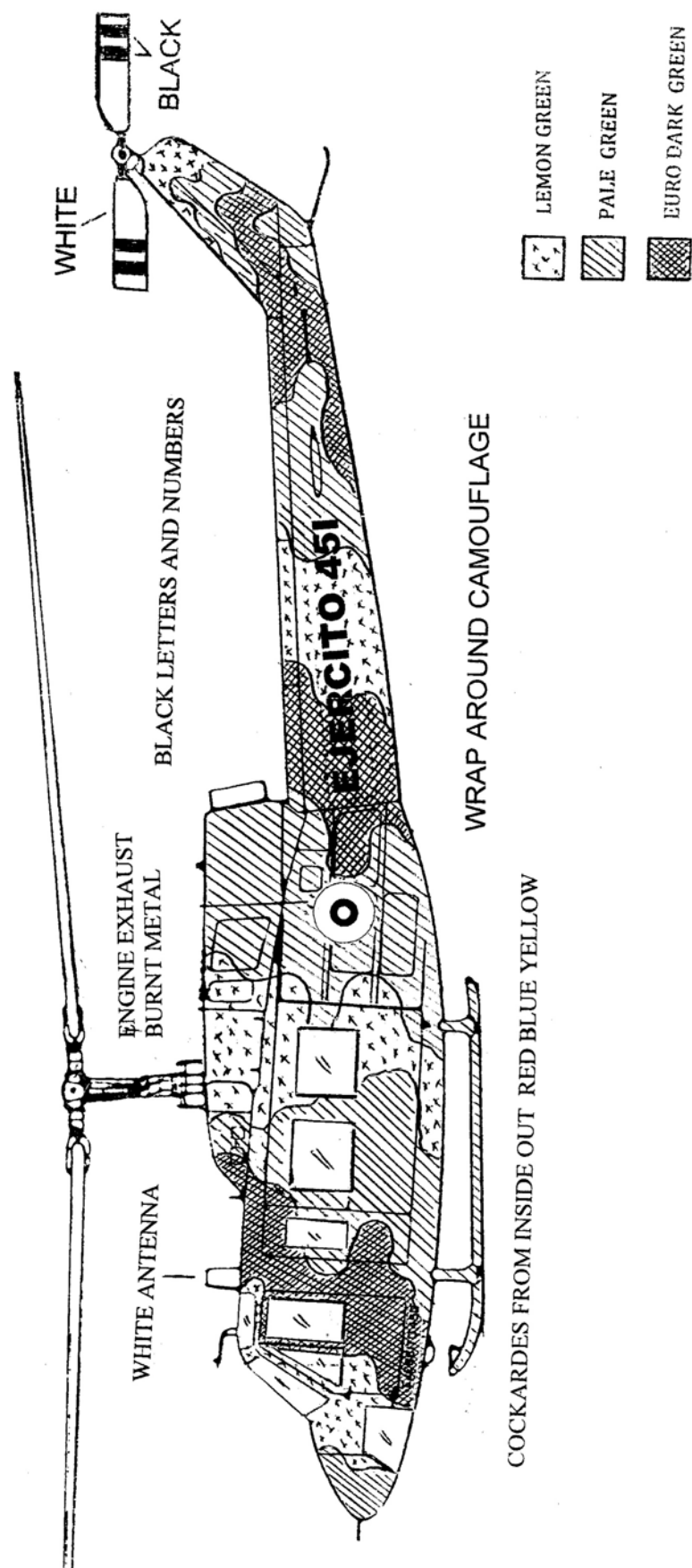
Jorge Delgado (SAFCH #), Ecuador.



Bell 214 AEE-451 during a lifting procedure at one of the garrison in the Ecuadorian rain forest in the late 1970's.

BELL 214B

AVIACION DEL EJERCITO ECUATORIANO



CAP JORGE DELGADO P.
(SAFCH # 862)



L'aviation française en Indochine des origines à 1945, par Christophe Cony et Michel Ledet avec la participation de Lucien Morareau. 300 mm x 215 mm, hard cover. 640 pages profusely illustrated with b&w/color photos, charts, maps, profiles, and insignia. Published by Editions Lela Presse @ 29, rue Paul Bert, 62230, Outreau, France. ISBN 978-2-914017-63-3. Websites: www.avions-bateaux.com; www.aircraft-navalship.com; Email: contact@avions-bateaux.com.

I pre-ordered this book back in 2010 from Lela Presse, publisher of the French Aviation magazine *Avions*. It seems that I had been waiting forever for its arrival until the eve of the 4th of July. And what an Independence Day gift it is!

L'aviation française en Indochine des origines à 1945 is a massive and beautifully produced document, which I believe is the most comprehensive coverage of the French aviation history in Indochina. It is profusely illustrated with numerous photographs; many of them new to me. I have been collecting aviation publications since the early 60s. Over the years, I've the good fortune to have acquired classics authored by William Green, Bill Gunston, Christopher Shores, and their likes. After amassing a collection of 40K+ publications, I must confess that I'm not an easily-impressed book buyer. *L'aviation française en Indochine des origines à 1945*, however, meets all my expectations and requirements. It will

shine among the most prominent and prized books in my collection.

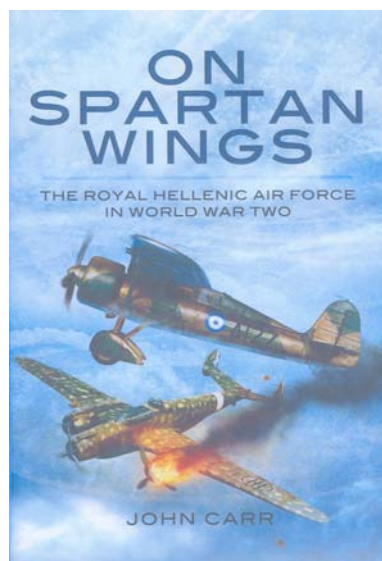
L'aviation française en Indochine des origines à 1945 contains 10 chapters and 5 appendices as follows:

Chapter 1: La France et l'Indochine: Aperçu Historique. Chapter 2: Le Temps des Pionniers. Chapter 3: La Première Guerre Mondiale. Chapter 4: 1919-1925 Création d'une Véritable Aviation Militaire. Chapter 5: 1926-1931. Chapter 6: 1931-1934. Chapter 7: De 1935 à 1945. Chapter 8: L'Aéronautique Navale en Indochine. Chapter 9: L'aviation Civile en Indochine. Chapter 10: Les Raids Aériens

Annexe I: Géographie de l'Indochine. Annexe II: Liste des Terrains d'Indochine. Annexe III: Filiation des Escadrilles. Annexe IV: Liste des Aéronefs Présents en Indochine. Annexe V: Les Marquages Avions de l'armée de l'air en Indochine.

The Table of Contents above says it all. *L'aviation française en Indochine des origines à 1945* covers both military and civil aviation history in Indochina. I'm totally impressed by the superb quality and the professional service of Lela Presse. I highly recommend *L'aviation française en Indochine des origines à 1945* as it is one of the few books that cover the aviation history of an area and era seldom touched by other aviation historians.

D Y Louie, P.E. (SAFCH # 544), USA.



On Spartan Wings: The Royal Hellenic Air Force in World War Two, by John Carr. Published by Pen & Sword. UK

£19.99; USA \$39.95. 176 pages 6.5 inches by 9.5 inches. Illustrated.

The author is half Greek by birth and is a journalist by profession. This comes out in his sparing use of language and ability to make the story flow.

The book starts with a brief history of Greek military aviation and the structure of the service, and how this was decreed by the Greek Government's wish not to be seen to be taking sides during the 1930s - thus the mixture of equipment they went to war with.

The following sections are:

The reasons for war: Mussolini's wish to be seen as an equal to Hitler, etc, are gone into and also the failings of both the Italian and Greek Generals to properly appreciate the use of Air Power

The debacle of the Italian invasion, the German invasion which followed, the intervention by the RAF, and the subsequent defeat are clearly explained

The setting up of the three Free Greek Squadrons 335/336 and 13 Mira is explained as well as their training in Rhodesia, and their dissatisfaction with the way RAF HQ treated them. The author also explains the various mutinies and internal squabbles caused by the infiltration of the units by Communist agitators.

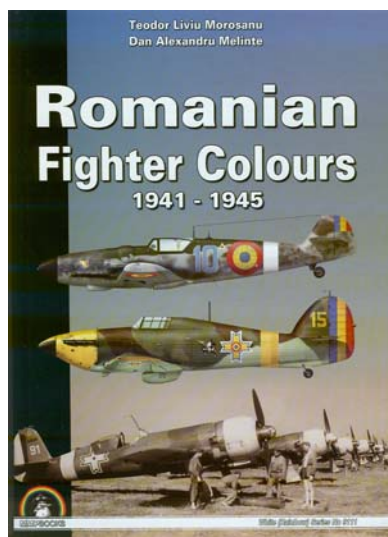
Much of the combat described is new to me and probably to a lot of other readers as will the subdued and suspicious reception they received on their return to Greece. This followed by their having to attack fellow Greeks during the Civil War.

The author has drawn not only on archival sources, but also the work of Ilias Kartalamakis whose work has never been published in this part of the world.

This is not a book for modellers! For that I would recommend Doug Dildy's articles in SAFO #60 and #61; also Michel Ledet in *Avions* #45 and #46

It is however a good lead in for those who wish to delve deeper and is a good read as well!!

Malcolm Barratt (SAFCH #1716), UK.



Romanian Fighter Colours 1941-1945, Teodor Liviu Morosanu & Dan Alexandru Melinte. A-4, 192 pages, hardcover. English text. (2010) MMPBooks White (Rainbow) Series #9111. ISBN 978-83-89450-90-6. \$59.00.

Each aircraft type is described first by a section on its operation history, and then by a section on "Camouflage & Markings". All sections are profusely illustrated by large, well-reproduced photos. The c&m sections have many excellently color profiles and multi-view drawings. The selection of photos and drawings include Romanian aircraft in per-war roundels, in the St. Michael Cross used while on the Axis side, and the roundels used after the Romanians joined the Allies.

Aircraft types covered are:

PZL P.11: 8 pages; 14 photos. Camouflage & Markings: 13 pages, 14 photos; 9 profiles; & 2 4-views.

PZL P.24: 5 pages, 9 photos. Camouflage & Markings: 9 pages, 9 photos, 4 profiles, & 3 4-views.

Hawker Hurricane Mk I: 4 pages, 7 photos. Camouflage & Markings: 10 pages, 7 photos, 5 profiles, & 3 4-views.

Heinkel He 112: 2 pages, 3 photos. Camouflage & markings: 12 pages, 12 photos, 7 profiles, & 3 4-views.

IAR 80/81: 9 pages, 19 photos. Camouflage & Markings: 30 pages, 19 profiles, 2 3-views, & 2 4-views.

Messerschmitt Bf 109E: 5 pages, 14 photos. Camouflage & Markings: 17 pages, 22 photos, 15 profiles, 1 3-view, & 1 4-view.

Messerschmitt BF 109G: 9 pages, 20 photos. Camouflage & Markings: 38 pages, 2 profiles, & 6 4-views.

Messerschmitt Bf 110: 4 pages, 4 photos, & 3 profiles.

MiG-3: 2 pages, 2 photos & 1 profile.

Polikarpov I-16: 3 pages, 6 photos, & 1 profile.

Focke-Wulf 190: 3 pages, 5 photos, & 2 profiles.

Appendices: Romanian unit structure; Romanian aviation ranks; Colors identifies by codes (e.g., FS595). Romanian insignia (St. Michael Cross, and pre- and post-war roundels).

The text is entirely in well-written English. However, the sections describing the operational service contain many references to locations that, while familiar to Romanians, will be unknown to others. The readers who stayed awake in high-school geography classes will have no trouble identifying such places as Bucharest and Constanța. However, the serious enthusiast will need an atlas to follow the action at such places as the cities of Bacău and Iași.

This is an excellent book, well worth the price. It should be of interest to both aviation enthusiasts and modelers. The latter will find many ideas to apply to models of familiar aircraft types in unfamiliar color schemes. It is highly recommended.



Martin Mariner, Nico Braas and Srecko Bradic. Warplane #1. Published by Lanasta. 48 pages, 220 mm by 270 mm. Softcover. ISBN 978-90-8616-161-4. www.lanasta.com. info@lanasta.com. €12.95. Text entirely in English.

This new series from Holland begins with the story of the Martin PBM

Mariner patrol bomber of WW2. Design of the Martin Model 167 began in 1937, and many of the unique design features were tested on a 3/8 flying model, the "Tadpole Clipper". The prototype XPBM-1 made its first flight in February 1939, and the first production PBM-1 entered service with the USN in September 1940. This was followed by a number of versions (mainly PBM-1, -3, -5, and -5A). A total of 1,366 PBMs were built.

The text is "salted" within a profusion of illustrations. These include:

Sixty-five well-reproduced photos mostly USN and many in color.

Eight pages with 10 side view drawings (each drawing extending across two pages). Personally, I think this is overkill, but the drawings do show every modification to the Mariner series.

Six color profile drawings: USN: PBM-1 (3), PBM-3, & PBM-3D; RAF PBM-3; & UK Mariner I.

Coverage of foreign use of the Mariner is satisfying: Argentina: a short text, but 5 photos (one in color). The RAAF and RAAF used a few PBMs for a short time; their use is covered in a short text complimented by one color profile drawing and one photo for each service. Netherlands: The disastrous career of the Mariner in the Dutch East Indies is well covered, but it includes only two photos. Uruguay's use of 3 PBM-5S is covered and includes one photo.

At first glance, the text appears to be overwhelmed by the profusion of photos and illustration. However, don't be fooled. This is not just another picture book. The text provides a good introduction to the development and service use of the Martin. And, the text is entirely in English.

This is a series worth watching. Future issues promised are #2 Hawker Hunter and #3 Bf 109G/K. Lanasta also publishes hardcover books on the Fokker C.5, D.21, & G-1. Contact the publisher for ordering information.

Aviation History Colouring Book

AHCBS are obtainable air mailed to anywhere direct from Ian Baker. An order form (including alternative payment details in other currencies) mailed or faxed upon request. Payment must accompany your order, using this method. No cards. Ian K. Baker, 31A



RAAF Colour Schemes & Markings, 1921-1951: Part 7. Ian K. Baker's Aviation History Colouring Book #74.

"Why is it that we encounter photos of wartime military transport aircraft, both USAAF and RAAF, apparently wearing Australian-style civil registration callsigns?" Ian Baker's explains this in his latest AHCB:

"Part 7 of this study of RAAF colour schemes, markings and camouflage looks at a much-neglected aspect of the subject: aircraft and markings of the DAT.

"DAT stands for Directorate of Air Transport, created to co-ordinate the combined air transport resources of the RAAF and the USAAF. Throughout 1942-43 and well into 1944, the pooled resources of the DAT strove to meet Allied aerial transport and communications requirements across the vast expanses of the South West Pacific Area of operations, which included the entire continent of Australia.

"As well as military aircraft, aircrews and air bases, Australia's civil operators and infrastructure were involved, contributing to the total effort. Arrangements could be diverse. There were USAAF aircraft loaned to the RAAF. There were civil airlines operators maintaining and flying USAAF aircraft. Aircraft were operating 24 hours a day, every day, in all seasons and conditions, on scheduled routes connecting all points across the SWPA along with all kinds of one-off tasks.

"Clearly a common radio callsign system was essential, so the pre-existing Australian civil aviation VH-registration system was adopted and extended to include every aircraft now under the coordination of the Directorate. This is why you find old photos of RAAF and USAAF transport aircraft marked with VH-callsigns."

This 20-page book begins with a well-researched and well-written 5-page history of the DAT. This is followed by 14 photos and 8 tone drawings: RAAF DC-2 'VH-CRF'; RAAF DC-2 'VH-CRH'; USAAF DC-2 'VH-CCH'; USAAF C-47 'CCU'; USAAF C-47 'VH-CFQ'; RAAF C-47 'VH-CUN'; RAAF Hudson 'VH-RBH'; and USAAF Liberator 'VH-CBL'. All these drawings show port-side views with top view included when necessary. Besides the tone drawings, there are multi-view drawings of the camouflage pattern for RAAF DC-2 and the splotch camouflage of USAAF C-47.

All students of the air war in the South Pacific will find AHCB #74 extremely interesting if only because of the fascinating history of the DAT.

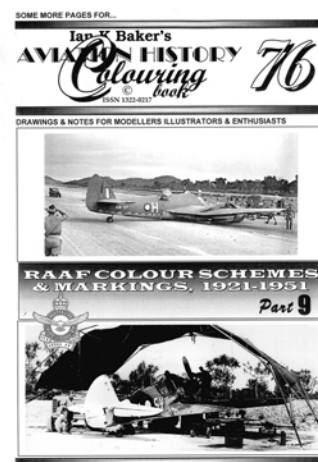


RAAF Colour Schemes & Markings, 1921-1951: Part 8. Ian K. Baker's Aviation History Colouring Book #75.

Ian says it best: "In any history there may come a point at which it becomes necessary to pause and give attention to fascinating sidelights. We have come to that point in our history of RAAF colour schemes and markings."

The topics covered are: "USAAF Aircraft in RAAF Camouflage": B-17C VH-CBA, B-18 VH-CWB -1942, photos. "Two RAAF DC-2s": A30-14 rare view

in early 1942 warpaint & markings, A30-11 clearly revealing mirror-image camouflage pattern was applied to those DC-2s - photos. "Some RAF Dakotas also Carried VH-Call Signs": Dakota IV, KN340, VH-YBM with RAF No 243 Sdqn, 1945 - detailed drawings & comments. "East Coast ASW War", 'Coastal White' & the RAAF: Anson AW665, PP-B with No 71 Sdqn, 1943 - detailed drawing & comments. "Haze Paint & the RAAF", Haze Paint to Australia, trial abandoned? 1942. Lockheed F-4 41-2156 on loan to RAAF No 75 Sdqn as 'P-38-56', 1943 - detailed drawings & comments. "RAAF Re-Thinking Seaplane Camouflage": The DHS Schemes adopted for Catalinas, Kingfisher trials, 1943. The DHS drawings. The DTS Schemes, 1943, never adopted: original drawings reproduced - five sets of drawings.



RAAF Colour Schemes & Markings, 1921-1951: Part 9. Ian K. Baker's Aviation History Colouring Book #76.

This is arguably the most enjoyable of Ian's monumental study of RAAF camouflage and markings. In particular, the discussion of the Australian Home Front contains information I've not seen elsewhere. The contents: "Background" 1943: End of the 'Holding War'; at home, at war; tide starts to turn. "Briefing: Camouflage & Markings 1943 into 1944": Three-letter aircraft codes introduced. USAAF Dark Olive Drab & Neutral Gray accepted for RAAF aircraft. New seaplane camouflage. Advance notice that Spitfire deliveries would be coming in Day Fighter Scheme. 1944; paint durability problems with British-built aircraft. Alterations to trainer

schemes. White tails introduced. "Individual Aircraft Described": Republic RP-43A-1 Lancer. Lockheed F-4-1 Lightning. Curtiss P-40E & P-40N Kittyhawks. Supermarine Spitfire Mk Vc (two examples). Consolidated PBV-5 & PBV-5A Catalinas. Vultee Vengeance (two examples). "Camouflage pattern diagrams" for characteristic USAAF splotch scheme on P-40s, & RAF-style factory-applied disruptive scheme on Vengeances. "Documentary History": AFHQ A3/43 - 'Code Letters for Operational and Reserve Squadrons' including a chart of the code letters for all RAAF squadrons.

Lockheed Hercules Production List 1954-2014, by Lars Olausson. 30th Edition, March 2012.

This 168-page, spiral-bound tome contains some 50,000 facts detailing the history of all 5756 members of the Hercules family including those on order for 2014. As an example of the information available, here's what it says about Argentine C-130H c/n 4578 'TC-68' that carried out bombing missions during the Malvinas Conflict: "1 ESC. Gruppo 1, TC-68 7503 (82 used as bomber on one occasion in Falklands war?, 9412, 9612 wfu, 0010 flying, 0406 wfu Palomar, 0804 same)." Pretty cryptic, but understandable – how else are you going to get 50, 00 facts into 168 pages?

A section I always read when a new edition comes out is "Destroyed Aircraft". Of the approximately 330 Hercules destroyed the most recent

addition is: Date 110726, c/n 4892, Maroc AF. Going to the "Production List" section, I found the Moroccan C-130H had "cr into mountain during approach to Guelmin. Fog?" One can spend hours on similar searches for information about the C-130s you read about in the aviation magazines.

The review copy of this and earlier edition of the C-130 Production List are available from the SAFCH Sales Service. This latest edition is US\$21 including postage. Or, it can be obtained for US\$21 including postage directly from Lars Olausson, Omsuddevagen 234, S-530 32 Satenas, Sweden. Lars says the preferred method of payment is "cash money in envelope at my risk". E-mail: larsolausson@telia

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Antarqui Decals All Antarqui decals are of good quality and are supported by attractive color illustrations and instruction sheet. Roundels, fin flashes, and serial numbers are provided for all aircraft. The instruction sheet is small, but adequate to show the placement of all the decals. A recent innovation is the introduction of twin-packs that consist of two related subjects. Besides new releases, as detailed below, Antarqui will be re-releasing older subjects in twin packs. For example, the Argentine Fiat G.55 will be paired with the Argentine Hawk 75. If you're interest in any of the single-sets, act now while supplies last.

Antarqui decals can be obtained directly from: Antarqui Decals, 757 Emory St. #106, Imperial Beach, CA 93032, USA. antarquidecals@yahoo.com, or from the SAFCH Sales Service: safo@redshift.com. The most recent Antarqui releases are:



Norwegian & Belgian Gloster Gladiators, 1/72-scale & 1/48-scale decals. Antarqui Twin Pack.

This new Antarqui Twin-Packs features two Gloster Gladiators that saw action during the opening months of WWII.

The 1/72-scale decal sheet for Norwegian Gladiator (95 mm by 50 mm) contains the fuselage numbers '525', 2 rudder stripes, and 4 wing stripes – all the markings you need to make a model of this participant in the heroic, but doomed, defense of

Norway against overwhelming Nazi air supremacy.

The 1/48-scale decal sheet for the Belgian Gladiator (95 mm by 75 mm) consist of 6 roundels, black identification codes 'G 20' for the undersurface of the lower wing, 2 white '20' for the vertical tail, and 2 small white '20' for the rudder.

The instruction sheet for the Norwegian Gladiator has a side-view drawing and both top and bottom plan views.



Two Latin Razorbacks: Bolivian P-47B & Dominican Republic P-51B. 1/72-scale decals. Antarqui Twin-Pack.

The other new Twin-Pack features two Latin American Razorbacks.

The Bolivian Thunderbolt is the familiar 'FAB 007' with a fierce cowl decoration. The decals (75 mm by 63 mm) contain 4 roundels, rudder stripes, the codes 'FAB007', and the cowlings with white eyes and teeth on a red background.

The decals (70 mm by 40 mm) for the Dominican Republic's Mustang contain 4 roundels, rudder stripes, and 4 codes '401' (for fuselage and wings – upper right and lower left).



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[Editor: The following letter has some interesting comments about the contents of SAFO #141.]

"P5: a very interesting account, you really have to admire Halicones for undertaking low-level attacks at extreme range in the sort of weather conditions that the South Atlantic could throw at them. P10: This continues to be a most enlightening series of essays by Doug Dildy. The black Po-2 may well encourage a model. P17: I will leave any comments on the subject of Dutch camouflage to Ian K Baker. P21: It never ceases to amaze me the new information that keeps surfacing from all sorts of odd comers of the aviation world. P23: Ah Lightnings! I'm currently reading a book on the history of the RAF 'At Home' Airshows in which the author says that for thirty years no RAF Show was complete without an EE Lightning - how true! Just one point, those visiting the Midland Air Museum to see their RSAF Lightning should check the website as they have various Open Days, usually on Sundays, when cars belonging to staff tend to get parked in front of the aircraft. Incidentally since the photo from DD's collection was taken, the aircraft had been given a good clean and most of the original Saudi markings and stencils replaced, also the aircraft acquired RAF serial ZF598 for a short time whilst they were trying to sell them on. P26: as a follow up to my review of the Japanese Aircraft book, I have been informed that two more volumes should be following on Allied Aircraft in Japanese Hands, and Japanese Aircraft in Allied Hands. P34:

Regarding Ted Koppel's note on CAP colours: the CAP website has an interesting historical section with colour shots of some of their WW2 types." Malcolm Barratt (SAFCH #2726), UK.

[Editor: Questions about the legitimacy of the ex-Bolivian Interstate L-8A continue. Here is the latest exchange:]

"Robert F. Dorr, my first aviation pen pal (from 1954 into the 1960s), sent to me in 4/1995 a pair of color slides of 42-88660/N37435 "in what may be accurate Bolivian markings." Its nameplate stated "accepted 11-11-42". Owners were: Karen McGill and Curtis Lowe Cloud, 4577 Calks Ferry Road, Leesville, SC 29070, tel. (703) 894-5345." Gary Kuhn (SAFCH #257), USA.

"Color image of this aircraft appeared in "AIR Classics" (which I often cite as ERROR Classics) for February 1990 (Vol.26, No.2). I challenged the owners at the time (Doug Jeanes, AirWaves Services of Boerne, TX) to authenticate the source of the aircraft and the alleged color scheme, and was never honored with a response of any sort. The fate of the eight L-8As acquired by Bolivia under Lend-Lease Project BL-7 (UNB No.BL.7) is fairly well understood. As of 22 September 1943, almost a year after they were delivered, two remained in their crates at La Paz (both damaged enroute) and three remained crated at Cochabamba, and the FAB expressed nothing but utter disdain for them. The two at La Paz were

subsequently burned leaving six. These all miraculously survived to be donated to civil flying schools and clubs circa 5 September 1944, but to my knowledge not a single one of them turned up on the "first" Bolivian civil register by 1951, i.e., CB-1 to CB-104. 42-88660 did in fact go to Bolivia and was msn 316. I would be very interested to know what msn is shown on the US Civil Register for N37435, as I find it nearly inconceivable that any of the FAB L-8A's survived much beyond 1949, let alone return to the United States." Dan Hagedorn (SAFCH #394), USA.

"I have a question to pass on to our members. The Trinidad and Tobago Defence Force used "Gazelle" choppers in the 70s and a photo of one of these, in a very sad state, can be found on www.acig.org. How did they look in their prime? Today, Bo 105 CBS helicopters are used. A drawing from a flight-simulation game shows one in overall white with red and black "deco" lines - true or false?" Nils Treichel (SAFCH #1467), Germany.

"We had some setbacks with the website, however, we finally decided to buy webspace in the US for a simple \$5.00 a month and the website is stable. I already linked to SAFO. I would appreciate you linking to www.modelfan.eu on your website. Any comment, suggestions etc. would be great. Let' have some thoughts on further cooperation." Fred Bachofner, Netherlands.



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The Curtiss C-46 Commando in Congolese Service: Captions on page 47



5.



7.



6.



8.

The Curtiss C-46 Commando in Congolese Service: Captions on page 47